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# DOMESTIC AND INTERNATIONAL PETROLEUM SITUATION AND THE IMPLICATIONS OF FEES ON IMPORTED OIL

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## HEARINGS

BEFORE THE

## COMMITTEE ON ENERGY AND NATURAL RESOURCES UNITED STATES SENATE

NINETY-NINTH CONGRESS

SECOND SESSION

ON THE

DOMESTIC AND INTERNATIONAL PETROLEUM SITUATION AND THE
IMPLICATIONS OF FEES ON IMPORTED OIL

MARCH 14, 20, AND 25, 1986

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# DOMESTIC AND INTERNATIONAL PETROLEUM SITUATION AND THE IMPLICATIONS OF FEES ON IMPORTED OIL

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**FRIDAY, MARCH 14, 1986**

U.S. SENATE,
COMMITTEE ON ENERGY AND NATURAL RESOURCES,
*Washington, DC.*

The committee met, pursuant to notice, at 10:34 a.m., in room SD-366, Dirksen Senate Office Building, Hon. James A. McClure (chairman) presiding.

Present: Senators McClure, Murkowski, Nickles, Hecht, Evans, Bingaman, and Rockefeller.

Also present: Howard Useem, professional staff member; and Elizabeth Moler, counsel for the minority.

## OPENING STATEMENT OF HON. JAMES A. McCLURE, A U.S. SENATOR FROM THE STATE OF IDAHO

The CHAIRMAN. The committee will come to order.

The committee today begins the first of three open oversight hearings on the domestic and international petroleum situation. This past Wednesday the committee met in closed session and received testimony from the Departments of Energy, State, and the Treasury, as well as from the Central Intelligence Agency.

On March 20, the committee will hold a related oversight hearing on the domestic and international implications of a fee on imported oil. On March 25, the committee will receive testimony from administration witnesses on both the current oil situation and the import fee issue.

The dramatic drop in oil prices in recent months is producing a mixed bag of results. Gasoline prices are beginning to fall in some parts of the country. Some economic projections suggest that the Nation's economy will benefit as a result. The effects so far would seem to be good news for the country. Or are they?

There are many other questions posed by this price decline and resulting oversupply that need to be addressed. What is the future of the domestic oil production? How does it affect our national security? What will be the effect on large and small financial institutions? What faces foreign nations who are selling oil in an effort to reduce their debt. Our distinguished group of witnesses today will shed some light on these and other related issues.

Prior to the Arab oil embargo of 1973, no one believed that OPEC could wield enough economic muscle to affect supply or price. The conventional wisdom in this country was that oil and petroleum products would always be cheap and plentiful. That wisdom was quickly dispelled when consumers began using such phrases as gasoline lines, odd-even days, and 10-gallon limits in their everyday vocabulary.

You would think that we would have learned a lesson from that difficult period. But concern over this country's energy security seems to have gone the way of leisure suits and disco music—another distant memory of the 1970's.

The lesson we should learn from today's oil situation is that the energy weapon still exists. Just as a marginal increase in OPEC production has driven oil prices down to their lowest levels in nearly a decade, a marginal drop in production could once again lead to shortages and skyrocketing prices.

This Sunday in Geneva, OPEC oil ministers will convene an emergency meeting to determine what actions they can take in this current situation. I note that yesterday Nigeria's petroleum resources minister called for a return to the policy of production management to raise prices to what he considers to be an acceptable and fair level. I think in this case, fairness is in the eye of the producer.

Another effect of the current oil situation that needs to be examined is the steep decline in exploration and development and its long-term implications. The number of active drilling rigs in this country has dropped by one-third over the past year and is 73 percent below its all-time high. Oil companies are announcing major reductions in their exploration and development budgets on a daily basis. Yet we still rely on foreign sources for nearly a third of our oil supplies.

We cannot allow the current oil glut and falling prices to be used as an excuse to abandon our efforts to reduce our energy vulnerability. To do so would set the stage for future supply disruptions, future economic troubles, and future threats to our national security.

With the oil market affecting so many aspects of this country, I continue to be disturbed by our complacency about this country's energy policy. The prevailing attitude seems to be that if the oil market sets a higher or lower price, so be it. But that completely ignores the fact that the market price is being set by a handful of producing nations that have their own interests at heart, not ours.

Again, I thank all of our witnesses for their attendance and I particularly want to extend a warm welcome to an old friend of this committee, the Honorable Jim Schlesinger.

Before turning to our witness, however, I will ask Senators present if they have any statement at this time.

Senator Hecht.

## STATEMENT OF HON. CHIC HECHT, A U.S. SENATOR FROM THE STATE OF NEVADA

Senator Hecht. Thank you, Mr. Chairman.

First of all, I want to compliment you on holding these hearings at this time because I think it is one of the most important issues facing not only the United States, but the world. The rapid fall in oil prices which began only a few months ago, although a boon to industry as a consumer, threatens havoc on the energy industry. Continued low prices will result in shutting down domestic wells if they become uneconomic to maintain and produce.

We do not need to wait to see the effect. A number of indications already show the negative impact on the energy industry. OCS leaseholders, drilling exploration, and rotary drill rig use are all down.

I do not support an oil import fee, but I am very concerned about the future of our domestic oil industry. I look forward to hearing suggestions and getting more background information in these hearings.

Thank you, Mr. Chairman.

The Chairman. Thank you.

Senator Rockefeller.

Senator Rockefeller. I have no statement.

The Chairman. Senator Bingaman.

### STATEMENT OF HON. JEFF BINGAMAN, A U.S. SENATOR FROM THE STATE OF NEW MEXICO

Senator Bingaman. Thank you, Mr. Chairman.

Let me just very briefly say that what you have indicated along with other Members is that this is a very serious problem for some parts of this country, my State in particular. The information I have is that for every dollar drop in the price of oil our State revenues drop about $14½ million. Clearly that is of concern to us.

Our unemployment is becoming a severe problem in the areas of our State that depend upon oil and gas production. The price has gone from about $26 in December to $14 this last week, the price that oil is selling for in our State.

So I am looking forward very much to Secretary Schlesinger's testimony.

Thank you.

The Chairman. Thank you, sir.

[The prepared statement of Senator Bingaman follows:]

STATEMENT BY SENATOR JEFF BINGAMAN
Oversight Hearings
Domestic and International Petroleum Situation
March 14, 1986

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Mr. Chairman, thank you for holding this hearing to look at the growing domestic and international crisis facing the petroleum industry. After four years of slowly falling prices, oil prices began to plunge in late 1985. The price decline over the past four months is already several times larger than the price increase triggered by the 1983 Arab Oil embargo. Whether we are entering an era of permanently lower prices or whether we are just in a transisiton period until a stable world price is established, one thing is clear: the future of the domestic oil industry and the energy security of our nation is at risk.

If the current downward spiral in oil prices continues, reduced exploration and production will make the United States as vulnerable to oil embargoes and escalating oil prices in the 1990's as it was in the 1970's. At stake is no less than the continued viability of the domestic oil and gas industry.

Several indicators portend a bleak future for this industry:

## Industry Indicators

1. The rig count, a closely watched guide to oil exploration activity, is currently less than one-third the level of 1981 -- the peak year for rig activity. It is approaching the all-time low since the 1950's. The current rig count is below 1300 as compared to 4600 in 1981. In New Mexico, drilling activity dropped from 135 in 1981, to 71 in 1985 and down further to 44 in February, 1986. In the past two weeks, it has slipped to 34.

2. A second indicator of trouble in the industry is the level of stripper well production - wells that produce less than 10 barrels a day. The nation's 452,000 stripper wells normally account for about 12 to 14 percent of U.S. production. The continued drop in oil price is making those wells uneconomical to operate. The Interstate Oil Compact Commission estimates that a $15 oil price would lead to the abandonment of 101,958 stripper wells (22.5%), a loss of 733 million barrels of reserves and 277,090 barrels/day of production; a $10 oil price would mean abandoning 184,547 stripper wells (40.8%), a loss of 2,610 million barrels of reserves and 638,046 barrels/day of production.

3. The third indicator of industry performance is the the size of oil company exploration budgets. Atlantic Richfield Company has cut its budget for exploration and production more than 50%. Texaco and Amoco have announced 10% reductions in their capital spending, most of which goes for exploration and production. Standard Oil has also announced plans to cut its exploration budget for 25-30 percent.

4. Tumbling oil prices are also causing increasing the number of non-performing loans. Some of the more heavily exposed lenders are being pushed to the brink of collapse.

## State and Local Impacts

The impact of lower prices has also spread to companies that provide oil related services and supplies, depressing the oil-based economies in communities throughout the Southwest -- reducing income, eliminating jobs, and discouraging business expansion. The oil crisis has helped raise New Mexico's jobless rate to 9.2% in January, up from 8.7 % in December. The State Employment Security Department expects that number to increase sharpley for February and March. The number of claims for unemployment in Hobbs, New Mexico -- the heart of the Permian Basin -- increased from an average of 40 per week last year to 153 per week so far in

1986. In San Juan county the number of claims per week have increased from 150 in 1985 to 506 last week.

State revenues in the Southwest are taking a severe beating from the oil price decline. For every $1 drop in the price of oil in New Mexico, there is a loss of $7,500,000 to the State's general fund and $7,000,000 to the permanent fund. This represents a loss to the state of $14.5 million for every dollar drop in the price of oil. The average posted price in New Mexico has dropped from $27/barrel in December 1985 to approximately $14/barrel this past week.

## Conclusion

It is abundantly clear from these statistics that the domestic oil industry is in trouble. The continued viability of our producers, especially independents, is in question.

Beside my concern for the industry in New Mexico, I am increasingly worried that falling prices threaten our nation's energy security. As drilling, production, and exploration are cut back, refinery capacity lowered, and imports of crude and product increased, the inevitable result is a return to foreign dependence.

We must not allow ourselves to be seduced by the promise of economic growth if this growth compromises the future of our nation's energy security. It is extremely short-sighted to ignore the long-term impact of declining oil prices in favor of temporary economic gains.

Today we will examine the extent of the problem in our industry. Next week the Committee will review the legislative proposals for potential remedies. I hope the Committee will be in the position to take some positive action to prevent an energy crisis.

The CHAIRMAN. Senator Evans.

## STATEMENT OF HON. DANIEL J. EVANS, A U.S. SENATOR FROM THE STATE OF WASHINGTON

Senator EVANS. Thank you, Mr. Chairman.

I would only reiterate what the chairman has said; that oil prices are really not being set by the market entirely. Too many people, I think, would like to sit back and let the market take its toll. And we are seeing the flip side, of course, of the pain that was suffered when prices shot up radically.

Now those who suffered then are reaping the benefits of the price decline. My greatest fear, however, is that we will, most of us, enjoy temporarily the radical price declines and forget what we thought we had learned just a decade ago.

I am confident, I have always been an optimist in our ability to seek out new and alternative energy sources, husbanding our nonrenewable resources and creating for ourselves a stable, reasonable energy future. But we cannot do it if we simply ignore the future by enjoying this respite that we are engaged in right now.

The CHAIRMAN. Senator Murkowski.

## STATEMENT OF HON. FRANK H. MURKOWSKI, A U.S. SENATOR FROM THE STATE OF ALASKA

Senator MURKOWSKI. Thank you, Mr. Chairman.

I, too, want to commend you for calling these hearings. I think it is most appropriate. It is my personal observation that the decline in oil prices ultimately will be much more severe as far as the overall economic impact and the escalation of oil prices before we are through with this charade, so to speak.

Mr. Chairman, we have had witnesses—we had a classified section which I think was important—I would hope that the witnesses today will dwell perhaps on potential Band-Aids or cures rather than continuing to outline the problem. The problem is severe.

We are aware of the problem. There are only so many alternatives, in my analysis, to this difficulty and I would hope that we would begin to get some testimony and some positive suggestions on how to address it.

I feel that we in Congress have a tremendous obligation to the American consumer who, in my opinion, unless something is done, would bear the brunt of the turnaround at a time when our industry is substantially incapable of meeting a spiral simply they cannot stay in business as oil prices decline beyond a certain point.

The decline of our stripper wells may never come back to its current production capability. So as a consequence, while I have no doubt that America's ingenuity will ultimately prevail, there is a considerable timeframe of exposure, and that exposure is to the American consumer.

I think it is our obligation to provide some foresight to ease the energy shock which is going to come; there is no question about it.

Thank you, Mr. Chairman.

The CHAIRMAN. I thought surely you would say, Senator Murkowski, that while Senator Bingaman is exactly right, declining oil revenues affect his State revenues by about $14½ million for each dollar in declining price, I think the impact on the State of Alaska is probably 10 times that.

Senator **MURKOWSKI**. That is true, but under these conditions sometimes a low profile——

[Laughter.]

The **CHAIRMAN**. I just wanted to get your interest.

Senator **BINGAMAN**. Mr Chairman, they have always been wealthier than we have, but we do what we can.

Senator **EVANS**. Mr. Chairman, they have been wise enough to set up a permanent fund which means they are the only semiendowed State in the country.

Senator **MURKOWSKI**. We do not really need any more of those observations. [Laughter.]

The **CHAIRMAN**. We can scarcely have a better witness to lead off, trying to outline for us with some perspective the scope of the challenge that our country faces and that the world faces today.

Having occupied diverse roles within the administration, the Secretary of Defense and the Secretary of the Department of Energy and other roles within Government, and certainly as a scholar and a statesman outside, we look forward to hearing your testimony, Dr. Schlesinger. You are very welcome here.

## STATEMENT OF HON. JAMES R. SCHLESINGER

Dr. **SCHLESINGER**. Thank you, Mr. Chairman.

Mr. Chairman, I shall insert my direct prepared remarks into the record.

The **CHAIRMAN**. They will be placed in full in the record.

Dr. **SCHLESINGER**. I will summarize the major points, bearing in mind Senator Murkowski's admonition that you are looking for remedies rather than further analyses of the problem.

Let me say at the outset that I am delighted to be back in this committee room; it provides me with a remembrance of things past. I discussed this very subject of rapidly changing oil prices in this committee room a few years ago, but at that time the direction of change was upward rather than downward. The consequences, however, of volatility remain substantial, irrespective of the direction in which they move.

Let me start with a brief comment on what is known in the United States as the energy problem. There is an impression abroad as energy prices drop that the energy problem is over because the public uses as the yardstick to the energy problem whether or not prices are rising, but there is no single energy problem. The energy problem is, in fact, a congeries of problems.

The performance of energy markets is but one of three energy elements in that energy problem. It is the impact of the operation of energy markets upon the general performance of the economy and upon national security that makes the problem exceedingly complex.

The decline in energy prices which are generally welcome from a consumer standpoint in the short term and generally welcome from the standpoint of the overall performance, the macroeconomic performance of the economy, is but one element of the problem.

Indeed, right now, one observes euphoria on Wall Street in the financial markets generally and the euphoria comes in large degree from that drop in oil prices which provides an economic stimulus which offsets the suppression of macroeconomic activity that occurred in the 1970's, and that reaction within its sphere is correct.

A drop in oil prices is the equivalent of a drop in taxes. However, there are other aspects of the problem, most notably, the national security aspects and the impact on long-term oil supply. The problem with energy is that in order to provide security of supply and in order to deal with national security problems, one wants high energy prices; and, by contrast, if one wants economic stimulus and if one wants to satisfy the consumer, one wants low energy prices. We cannot have both at the same time.

So the art for the policymaker is to strike a balance in the national interest. The oil markets at the present time are demoralized. They have been demoralized deliberately by actions of the cartel leader, which has decided that it must induce cooperation in constraining oil production from major non-OPEC producers and most particularly the United Kingdom.

The drop in oil price, the rise in production, was intended to intimidate Mrs. Thatcher and the United Kingdom into collaboration. But as Argentine generals some years ago discovered, the Iron Lady does not intimidate very easily.

As a result, we have continuation of demoralization and turmoil in these oil markets and no one knows when that will end. That depends upon analytical factors more than economic factors.

The consequences in the United States, as you know, are severe. Much of our production is stripper well production. The United States is the highest cost oil province in the world amongst major producers. By contrast the Saudis, to produce oil at 50 cents or a dollar a barrel, at $15 a barrel their cash-flow remains about $14 a barrel, whereas in the United States producers have difficulty covering out-of-pocket costs.

For the highest cost producer to look with indifference upon the lowest cost producers, cutting prices is shortsighted. The latest estimate that I had coming out of Texas was that if oil prices remain at $15 a barrel for 6 months, we will have 30,000 well abandonments in this country and that those well abandonments will continue over the long haul.

If oil prices remain low, it does not pay to invest the resources in the maintenance of production. Heavy oil is being shut in in the State of California for overpowering economic reasons. The market is disappearing.

As we look down the line we see, as the Chairman has indicated, major reductions in capital expenditures. Exxon yesterday announced a cut in its capital budget of almost $3 billion. The estimates that we have would indicate that between 1981 and 1986 at $15 a barrel, the capital expenditures of the oil industry in the United States will decline by 75 to 80 percent. That means by the middle 1990's, we will be importing more than 9 million barrels a day, which was the estimate of the Department of Energy before the collapse of oil prices.

By the end of the decade, we will be dependent on the outside world. Does one care about these free market forces in operation? If we could obtain all the oil that we needed from Canada, from Mexico, from the Western Hemisphere, we might not care, but 85 percent of the spare capacity worldwide today is in the Persian Gulf, the most volatile region of the world. There are security aspects that should concern us.

Finally, under the heading of security and foreign policy, one should note that the volatility of energy markets brings great pressure to bear on oil exporting countries, many of which are friendly to the United States: The impact on Egypt, in which there was a riot of security police just 10 days ago; the impact on Indonesia which was perhaps our great accomplishment as a result of the Vietnam war At $25 a barrel, development activities in Indonesia; at $15 a barrel, we see the development of political instability.

Mexico, our neighbor to the south, is in severe difficulties, and one can run down the list of friendly countries.

If oil prices were stable, these problems would not arise. But the new volatility in the oil market creates problems that are beyond the professional interest of economists per se to investigate.

Thank you, Mr. Chairman.

[The prepared statement of Dr. Schlesinger follows:]

EMBARGOED UNTIL:
10:00 am
March 14, 1986

STATEMENT OF
JAMES R. SCHLESINGER
BEFORE THE
UNITED STATES SENATE
COMMITTEE ON ENERGY AND NATURAL RESOURCES
OVERSIGHT HEARINGS ON
"THE DOMESTIC AND INTERNATIONAL PETROLEUM SITUATION"
March 14, 1986

Mr. Chairman, Members of the Committee

It is for me a special pleasure to appear before this Committee today to examine the consequences of rapidly changing oil prices. For me this session provides a touch of nostalgia — a remembrance of things past. In previous years I testified before this Committee on precisely the same subject. On those other occasions, however, oil price movements were causing problems by moving upwards rather than downwards — as at the present time.

The current decline, in a sense, implies a reversal of the macroeconomic difficulties encountered during the upsurge of oil prices in the 1970's — stunted economic growth, unemployment, and a general rise in prices. The impact of falling energy prices is to ease inflation and to stimulate more rapid economic growth. Serious long-term problems that were then alleviated by the rise in oil prices -- long-term oil supply, and national security concerns — are now being intensified. Yet, since these are longer-term problems, they get relatively less attention. Indeed, in today's widespread euphoria regarding the macroeconomic benefits of falling oil prices, most notable in the financial markets, these issues are regularly ignored.

In recent years the excess capacity for oil production worldwide and the absence of steadily rising prices has led many Americans to a happy, if inaccurate conclusion: the energy problem is over. But the energy problem has not been solved; rather it is misunderstood. In fact, the energy problem is not a single problem, but rather a congeries of problems. It features the three interlocking elements of a.) the relationship of energy market performance to b.) economic growth and price stability and c.) security of energy supply and other national security concerns. The disquieting reality is that these elements operate at cross-purposes in terms of achieving national objectives. A rising oil price brings a serious deterioration in macroeconomic performance, but eases concerns about oil supply and national security. By contrast, falling energy prices bring rapid improvement for the overall economy, but a worsening of oil supply and national concerns, especially over the longer run.

In recent years the interpretation of the nature of the OPEC cartel has substantially changed. In earlier years it had appeared to many, including myself, that the burgeoning demand for oil that had marked the period since World War II and the limited resource base implied that the cartel was partially exempt from the ailments that have historically afflicted other cartels. But in the '80s these conditions have been altered. A small decline in oil usage of about 10 percent along with a modest, if temporary, expansion of non-OPEC production has subjected the cartel in the 1980's to pressures that the members scarcely anticipated in the '70s. Their expectation of steadily rising prices and expanding revenues failed to materialize -- and (at least temporarily) has turned to ashes.

What we see today may be described as "the normalization of OPEC" -- an OPEC becoming more and more like an ordinary cartel. We observe "price wars" intended to intimidate uncooperative producers into controlling production. We have seen the cartel leader, Saudi Arabia, watch its market share erode, as it attempted to hold up a price umbrella by serving as swing producer. Such market erosion is a phenomenon that has been experienced by leaders in other cartels in the past. The current price war was initiated by the cartel leader. But we should also bear in mind that Saudi Arabia is the low-cost producer. At $15/bbl. the Saudis still enjoy net cash flow of $13/bbl. or more. The same cannot be said in other production areas, where out-of-pocket costs may or may not be covered. For the United States, which is the highest cost oil province among major producing nations, the implications for its own long-term oil supply deserve long and careful pondering.

A second change in the character of energy markets is their immense volatility — in place of what was anticipated to be a *steady rise* in the real oil price. When energy prices fall sharply, volatility can provide significant benefits, so dramatically reflected at the present time in prospects for economic growth and in conditions in the financial markets. But volatility can also impose substantial strains, both economic and political. Both rapidly rising prices and rapidly falling prices impose pains of adjustment — that economists tend to abstract from.

Let me turn now to a discussion of the three individual elements that combine to make up the energy problem.

I shall start with energy market performance. The recent fall in oil prices reflected a Saudi attempt to pressure the United Kingdom and Mrs. Thatcher into cooperation in controlling oil production. As Argentine generals had earlier discovered, the Iron Lady is not easy to intimidate. The consequence has been a drastic fall of oil prices which has, in real terms, brought them *below* the level prevailing in 1978 before the fall of the Shah.

When will the current chaos in the oil market come to an end -- and when will oil prices rise? Nobody knows! It is anybody's guess! All we have is speculation -- some, though certainly not all, informed speculation. In the United States the consequences of the drop in prices have been dramatic. Last week the number of rigs operating onshore had fallen to 1,248. That figure is 40 percent lower than last year -- and 75 percent below the peak reached in 1981. No one should expect a revival of drilling activity during this period of uncertainty. Not only is exploration and development activity being curtailed, but production is affected directly. Heavy oil production is now being shut in. With respect to well abandonments it is projected that we shall have some 30,000, if the price of oil remains at $15 for six months. Moreover, the substitution of other forms of energy for oil has now been sharply reduced, if not reversed. Conservation will be weakened. U. S. demand for oil will rise more rapidly than if prices had remained in the high $20's.

The upshot is that the United States is now in the process of creating a substantially increased oil dependency for the 1990's. By the middle 1990's we shall with high assurance reach the import level predicted by the Department of Energy of nine million barrels a day. In brief, we are now sowing the seeds of the next energy crisis.

Very briefly I shall comment on the economic and financial aspects of falling oil prices, for these are reasonably well understood. Worldwide falling oil prices are macroeconomically beneficial, since the number of consumers vastly exceed the number of producers. It should be noted, however, that this presupposes that the financial system will remain reasonably intact. (Economists tend to assume frictionless adjustments.) It also should be noted that the general economic benefits may not be paralleled by political benefits worldwide. I shall come back to this momentarily, for it broaches upon the subject of political and security concerns. We are keenly aware of the benefits of lower oil prices in the importing nations. But for many producers what we see today can be described as the Third Oil Shock. This clearly is the case in such countries as Mexico, Egypt, Nigeria, Venezuela, and even Saudi Arabia — countries for whose political stability the United States has an abiding concern. Such countries have come to depend upon an inflow of revenue and have developed expectations with respect to living standards that will now collapse. It should be clear, therefore, that the fall in oil prices has detrimental elements associated with it, and is therefore not simply the beneficial reversal of the prior run up in oil prices.

I come, at last, to perhaps the most important long-term element and that is the national security impact of energy market conditions. The more rapid rise in energy imports, the more rapid decline in U.S. domestic production implies a degree of dependency of the United States on precarious sources of supply that inevitably causes concern. As the great international stabilizing power, the United States is in a unique position. Its dependence on insecure sources of energy would constrain its leeway in foreign policy — in ways of greater concern than would be true of the other industrial democracies.

But perhaps equally important from the national standpoint is the impact of falling oil prices on political stability in friendly countries. Egypt, for example, has been the principal U.S. ally in the Arab world. Last week there was a revolt among Egyptiah security police recruits — that required the Army to suppress. The Muburak regime is having increasingly severe domestic difficulties. Generally throughout the Middle East the effect of declining oil prices will tend to strengthen both radicals and fundamentalists at the expense of the Arab moderates.

The same concerns may be expressed about countries outside of the Middle East. Indonesia has been one of the happy developments in terms of U.S. foreign policy since the collapse of the Sukarno regime. As oil prices decline, the problems for Indonesia intensify: its development efforts wither, its ability to meet its current account obligations ends, and its internal politics may become more volatile. And, finally, there is the case of Mexico. Its problems indeed become increasingly severe, though one may hope not insolvable. The political condition of Mexico, one scarcely needs to observe, is of the deepest concern to the United States.

In conclusion, one may say that the consequences of a fall in oil prices are indeed mixed. However, on the negative side it implies a greater oil dependency in the long run and political instabilities in producing countries in the nearer term. Moreover, the very volatility that is now a characteristic of the oil market is in itself politically and economically disturbing. And, finally, if we need to be reminded of the delicate balance in oil market conditions, we need only look to the present circumstances in the Persian Gulf. If Iran and the Ayatollah Khomeini actually destroy the regime of Saddam Hussein in Iraq, then the oil market will be radically and permanently altered. Merely reflecting on that matter should cause us to examine the domestic consequences of falling oil prices.

Mr. Chairman, this concludes my statement. I shall be happy to answer any questions that you or the other members of the Committee may have.

The **Chairman**. Thank you very much, Dr. Schlesinger.

We will start first with Senator Hecht. Do you have questions?

Senator **Hecht**. Dr. Schlesinger, if you were sitting up here as a Senator, what would you be doing now about what you have just brought out?

Dr. **Schlesinger**. I think that I would make two points. One is the general point that the United States tend to oscillate between complaceny and panic with regard to energy problems, and we are now in a complacency period.

One of the difficult tasks of our political leaders, members of the Senate, members of the executive branch, is to awaken the public to the long-run security implications of a continuation of these low oil prices. It is a question of raising the consciousness of the public. That is a general political task.

But you and Senator Murkowski earlier asked what do we do about it? The remedy is a lot more difficult to find than the analysis of consequences. This is perhaps not the ideal time to raise the question of the use of the Tax Code to stabilize the oil industry in view of all of the pressures that have existed within the package dubbed tax reform, but I would be inclined myself to investigate very carefully, since this is still a pressing item in the Congress, investigate very carefully the use of the Tax Code as a way of stabilizing the domestic oil industry in view of this very greatly enhanced volatility of the international oil price.

We have over the years generally assumed that we would have a fixed depletion allowance, for example, and whether the oil price was $2.80 a barrel or $30 a barrel, the assumption has been that it should be fixed.

I think that one might investigate increasing the depletion allowance as the international oil market falls and the industry must accept, in parallel, a decline in the depletion allowance when, as in the 1990's, the oil market rises to $30, $40, and $50 a barrel. It will be a way of preserving our industry throughout this period.

It is tempting, of course, to think of an oil import fee. I must say that I think that the political base for that is very thin.

Senator **Hecht**. Thank you very much, Mr. Chairman.

The **Chairman**. Thank you.

Senator Rockefeller.

Senator **Rockefeller**. Mr. Secretary, do you agree with the analysis that this low cost of oil is going to continue at least into or through the early 1990's?

Dr. **Schlesinger**. No, sir. I think that while that is plausible, I think it is very unlikely that it will continue into the early 1990's.

Let us go back to where we were just a few years ago, Mr. Chairman. The Ayatollah Khamenei has ambitions. His forces are now on the west side of the Shah Alla Raab. It is possible, although one would not bet on it, that the Iranian forces will overcome the resistance in Iraq.

Senator **Murkowski**. I did not hear that.

Dr. **Schlesinger**. It is possible, Senator Murkowski, that Iranian forces will wear down the resistance in Iraq. We had not thought that likely in recent years simply because the Iraqi military equipment is so much better. But the morale, the number, the composition of Iranian troops give them the moral initiative, if I can call it that, if indeed Iraq collapses and the regime of Saddam Husayn collapses, the oil market will be transformed immediately. And the reason is that under those circumstances, the Ayatollah Khamenei becomes the dominant figure in the cartel.

Kuwait may or may not survive under those conditions. I would think it unlikely that the regime could survive, and Saudi Arabia as well as the UAE would be forced under those circumstances to adopt production policies satisfactory to Teheran.

The consequence, Senator Rockefeller, is that even now, even under the present circumstances, that there is a possibility that the oil market could turn around very quickly. I think it unlikely, but it is possible.

Next aspect. As things are going now, we will see OPEC production demand of about 19 or 20 million barrels a day by, let's say, 1989 to 1990. That is enough to revive the cartel. And the next cartel that you see will be an entirely different cartel from the past. It will not be dependent, as at the present time, on collaboration from the British and Norwegians or whether or not the Libyans and Nigerians observe the rules; it will be in a cartel that is dominated by the Persian Gulf States.

Even without Iran destroying Iraq, beneath the surface collaboration continues between Iraq and Iran within the OPEC context. Both oil ministries are exceedingly cartel-minded. When the Ayatollah passes from the scene, as he must some day—or I believe he must—there will be two cartel-minded powers at the head of the Gulf that dominate military powers and those dominant military powers will be in a position to order the other Gulf powers to respond to their directives. You will have then an inner cartel of five Gulf States, and in 1990, I expect to see that inner cartel back in the driver's seat.

So I would think it very unlikely that we will have oil prices down here at $15 a barrel.

Moreover, the effect of what we see today will bring a drop in American production and Canadian production, in British production, in non-OPEC production generally, so that the leverage of the outside world to mitigate the power of the cartel will be reduced by the 1990's.

Senator **Rockefeller**. The reason I asked that question, Mr. Secretary, if you are correct at least with respect to the cost of oil and, therefore, the impact on production, what are coal folks meant to think, looking toward the future?

There is some point there at which the cost factors intersect. If oil stays where it is—either spot or more normal—then the question of can one really fix the Tax Code in a way to stabilize the industry, then I would think you would be right.

On the other hand, you are getting a phenomenon. Earlier this week, San Diego Gas & Electric announced that they were going to start backing out coal because they want to use oil for electric power generation.

That brings up the whole question of the effect of international oil prices on power decisions and not political power decisions, but what kind of fuels to be used. In the coal part of all of this, the price of oil is really fundamental, not just as it is now, but how people view it to be in the short-term/mid-term future.

You are saying, you are predicating the pre-1990 increase in the price of oil on events of a military nature in the Middle East, events which might very well happen, and that certainly is the trend there.

Short of that happening, however, are there other forces which would also cause the price of oil to come down and thus build in some predicatability, both for those public utility decisionmakers as well as Tax Code decisionmakers?

Dr. SCHLESINGER. I think, Senator Rockefeller, that indeed, the oil price will not be stable. It is unlikely to stay down here at $14 or $15 a barrel. It could pop up to $21, $22 a barrel possibly next heating season, unlikely by that time, but within a couple of years.

But that does not solve the problem that you raise because at $20 a barrel oil is still very attractive for domestic uses. And the industry, most notably the State of Alaska, is under extreme duress at a $20 price. We are a high-cost producer.

The purpose of changing the Tax Code would not be to stabilize the industry but, rather, to reduce the instabilities and to sustain the industry during periods of difficulty. When you have the kind of volatility that we have at the present time in the oil market, even if oil prices could go back up again, there would be an apprehension that they would collapse—the history of cartels.

Senator, I cannot forbear remarking that my instructing a Rockefeller on the history of oil cartels——

[Laughter.]

Dr. SCHLESINGER [continuing]. Would seem to be a little presumptuous. But the history of cartels is indeed of these price gyrations, and under those circumstances will be apprehensive even when the price goes back up again and he will refrain from shifting to alternative fuels. He will refrain from making investments in synthetics. He will refrain under those circumstances from drilling operations.

The power decisions, if they are not guided by Federal policy to induce utilities to move in the direction of domestic fuels—gas, coal, nuclear—that those power decisions will be to shift back toward the cheapest available fuel which is imported oil.

There is no solution for that other than a change in Federal policy or an increase in the oil price which, as you point out, while possible before 1990, is unlikely.

Senator ROCKEFELLER. The change in Federal policy, so far you have indicated to Senator Hecht, ought to be the education of the public and the public really instructs the Congress on what to do about energy policy.

What would you think that we ought to be doing about that?

Dr. SCHLESINGER. Well, this is almost obsolete. This is the kind of thing that one talked about when prices were going up and there was great concern about energy independence. But the utilities can be directed by Federal policy to use domestic fuels and not to shift back to oil. The temptation now would be to shift back to imported oil.

Senator ROCKEFELLER. That was a policy that was in place, was it not?

Dr. SCHLESINGER. That was a policy that was in place. The problem is that when one leaves decisions to the free market, that the free market is a two-edged sword and those in favor of market forces in period of rising prices tend to look with despair upon market forces during periods of declining prices.

I think that, given the importance of the energy segment to the American economy, that we need to recognize that this is one of those things, as Adam Smith told us, that cannot be left purely to the play of market forces. The market, as the chairman has pointed out, is not a free market. It is susceptible to political decisions on the part of the individual producers.

Senator ROCKEFELLER. Mr. Chairman, if I might just ask one more short question.

I think it is often true that the smartest corporate managers are those who make the most difficult capital investments or do the most expensive research at the time that it is least easy to justify in terms of the bottom line.

Such would seem to be a time for us in terms of research and development, synthetic fuels, alternative fuel policies for this country. I can draw no other conclusion than that you are suggesting that in spite of Gramm-Rudman and in spite of the fact that energy prices is on a distant back burner, still on the stove, that it is unwise for this country in view of your figuring of short-term oil price relief, that this is the time that we ought to be making research and development fuel policy decisions, which would be extremely difficult to pass politically, which would be extremely difficult to sell to the public, which would be extremely difficult to create through the context of urgency, but which in fact are urgent to do at this point, with or without public support.

Dr. SCHLESINGER. I agree entirely. I would use the word "desirable" in the long run rather than "urgent." The problem is that these things are not urgent. The easy thing to do is to take advantage of the collapse of the international oil market without appreciation for the longer term consequences for the energy sector of the United States and for the long-term stability of the American economy.

Senator ROCKEFELLER. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator.

Senator Bingaman.

Senator BINGAMAN. Thank you, Mr. Chairman.

Let me just start by reading you a quote from Secretary of Energy Herrington's testimony to this committee February 18, to get your reaction.

He did not seem to see the problem the way you did or you do. He indicated that "Energy problems are no longer a destabilizing force in the national life and economy."

I gather from your testimony, you do not agree with that.

Dr. SCHLESINGER. Well, I will give my views. I do not want to talk about Secretary Herrington's views.

I will say that the administration has been quite consistent from the first with regard to reliance upon market forces from its first national energy plan. It stresses that the Government must not interfere; that this is consistent with that position.

I do not agree with the view that energy is not destabilized. The volatility of the international market has a major domestic effect, aside from national security. Of course, the national security aspects we must always bear in mind. But aside from national security, in Senator Rockefeller's State and many other coal-producing States, the drop in the oil prices mean unemployment in the coal fields.

The drop in the oil prices, Senator Nickles' State and other States in the Southwest are going to put the banking system or regional banking system under great pressure. A run-up in prices, a sharp decline in prices, inevitably puts the economy through the pains of adjustment. And we would be far better off if energy prices were generally stable rather than subject to volatile change.

It is true, as Secretary Herrington indicates, that a drop in energy prices is not macroeconomically destabilizing because it brings about an expansion overall of income, but that is of small satisfaction to the banker in the Southwest whose bank is going bankrupt or the miner in West Virginia or elsewhere. Price gyrations are destabilizing.

The CHAIRMAN. Could I interrupt for just a moment? I apologize. I have just been called to come to the floor where we are debating the reconciliation bill that has several sections on the Outer Continental Shelf oil policy. And that is the reason Senator Johnston is not here, and I should have said that at the beginning.

We hope that as a result, we will be able to return. Thank you very, very much. I apologize. I must leave. I will turn the gavel over to Senator Murkowski.

Senator MURKOWSKI [presiding]. Mr. Chairman, since you are going to be representing Alaska's interest, I wish you well.

Please proceed, Senator Bingaman.

Senator BINGAMAN. Thank you very much.

Let me ask another question. We always hear that there is an international or a national security problem with increased dependence on foreign oil. Could you elaborate somewhat on the extent of this as a national security problem, the extent of this anticipated increased dependence on foreign oil as a national security problem?

Dr. SCHLESINGER. Yes, sir. The first point to make is that if the oil were generally available in foreign countries that were secure in terms of supply, it would not be a serious national security problem if we could draw upon Canadian resources or Mexican resources or Venezuelan resources.

The problem I believe comes from the concentration of oil reserves in the Persian Gulf which is very close to the heart of the seat of power, and needless to say well-removed from American power, and that Persian Gulf region remains the most volatile region in the world politically.

Those reserves are out there. If the United States were to become dependent upon that region of the world, which we are not today, but which we are likely to become more so in the future, then its leeway in foreign policy is diminished.

You may point out that the Japanese, the Germans, the French, others, are dependent upon the Persian Gulf and that that is not so much of a national security concern.

But these other industrial countries are not the great stabilizing power in the world. The United States has special responsibilities, and the leeway for our foreign policy is reduced by the dependency upon those nations. It provides them with much greater political influence and it makes us vulnerable to a hypothetical cutoff, as reduced of course by the size of our oil reserves.

Senator **Bingaman**. Let me just ask on one other issue. You referred to the effect which the dropping price of oil might have on the banking system in the Southwest, and I know that is a very real one because we are seeing it there.

What do you anticipate the drop in world oil prices will do to the stability of the international banking system?

Dr. **Schlesinger**. Unless there is a remedy which will involve an active role for the United States for various oil producers, they will default.

Now, I am sure that Chairman Volcker has this possibility very firmly in mind. I think the Chairman very wisely refrains from ruminating on it in public, which would be disturbing, but he will undoubtedly have a rescue plan in his back pocket that he has discussed with other central bankers.

There will have to be a rescue operation, just to take the case of most direct concern to the United States, for Mexico. There is no way that Mexico can live up to its present obligations if oil prices are $12 and $15 a barrel. The political pressures being applied through economic pressures will be severe.

As you know, Mexico went through an austerity program some years ago, to live with the first wave of problems that had been created by oil, and I think that the political capacity in Mexico to absorb further austerity has pretty well dissipated.

So we are going to have to move in to salvage the international system. There will be domestic problems, too, because our banks of course lend internationally and that will create problems about whether or not we bail out the stockholders. But we cannot allow our banking system to go bust.

If we do so, then the problems that have been touched off are much more severe.

Frequently economists, when they talk about market performance, ignore these problems. They have frictionless adjustments and they move from one stable equilibrium to another stable equilibrium and so forth. They do not concern themselves with the pressures that are placed upon the financial structure of this volatile oil market.

Senator **Bingaman**. That is all I have, Mr. Chairman. Thank you very much.

Senator **Murkowski**. Senator Evans.

Senator **Evans**. Thank you, Mr. Chairman.

It seems to me that it is quite apparent from your testimony and from just common sense that the changes in production, changes in oil supply, tend to be longer term and slower than we have found the changes in price. And our ability to respond quickly is not as easy as it might be in other markets, other products, other kinds of things.

With that in mind, I am sure that during the rest of the day we will have some that will suggest well, let the market be. And I detect that you do not believe that that in its purest form is appropriate under the current circumstances. Is that true?

Dr. **Schlesinger**. That is correct, Senator.

Senator EVANS. With that in mind, conservation of course has been a help. I am reading some of the testimony to come. I am sure that some will testify that the conservation in place will remain, and that will be a dampening effect on sharp rises in the use of oil, but half our petroleum is used for transportation energy.

Do you think under the current circumstances it is wise for the Congress and for the Government to abandon or to reduce the fuel efficiency standards in automobiles?

Dr. SCHLESINGER. I think that would be unwise in the long run.

Senator EVANS. I agree with you. Unfortunately, the administration does not.

Dr. SCHLESINGER. That does not apply necessarily to the 55-mile-an-hour limit.

Senator EVANS. I am talking about the fuel efficiency standards.

Dr. SCHLESINGER. If we let the speed go up, we can reduce it at some future date.

Senator EVANS. What shall we do about encouraging the potential of alternative fuel sources, speaking again of maybe the longer run, but I am not sure how much in the future. The advent of hydrogen, for instance, as an alternative fuel, the use of fuel cells and some of the research now going on in fuel seems to be highly encouraging.

Do we need more encouragement, more direct support from the Federal Government? Is nothing done, in your view, through the various university and corporate laboratories?

Dr. SCHLESINGER. Senator, you and your colleagues have to wrestle with Gramm-Rudman and all that it implies. Let me say from the standpoint of energy security in itself, we are doing too little now in terms of research and development support from the Government at the very moment.

As Exxon's decision of yesterday underscores, the private sector sees less and less reason to sustain the exploration of new technologies that will in the long run partially substitute for oil.

Senator EVANS. I might say in passing that I agree with my colleague from West Virginia that the best decisions are often made under the most difficult circumstances, and that Gramm-Rudman does not require us to do anything at all, other than to get a $144 billion deficit at the end of our budgetmaking this year. We can do it by setting whatever priorities we choose. We can do it by setting whatever spending levels we choose as long as we can cover those with adequate revenue.

Dr. SCHLESINGER. I think that Senator Rockefeller might agree that those decisions, while they are the most admirable ones, are not necessarily the most frequent ones.

Senator EVANS. I understand that. And perhaps this is one of those rare years. Maybe we will have better than average response.

What about an alternative to an oil import fee? You have had a considerable amount of experience as Secretary in negotiating with Mexico and in setting some long-term purchase agreements which then, I understand, had to be renegotiated downward.

Should we investigate the potential of longer term contracts, especially with some of our friends and those who have considerable debt with the United States in setting some long-term stable price contracts, with the recognition that they may be higher than world prices; that, in essence, subsidy I suppose is sort of an alternative to an oil import fee? Does that make sense at all in terms of our relationship with countries like Mexico?

Dr. Schlesinger. I think that we should carefully explore that as an alternative. I would think that more general measures of assistance, of capital investment in Mexico would be preferable.

And the reason for that is that we have political stakes in the Mideast. Egypt's foreign exchange earnings are going to drop by \$2½ billion this year, a country under great pressure. If we make special arrangements with Mexico, we wind up hurting friends elsewhere in the world.

So I think that it deserves exploration, but that one should be very careful about entering into such arrangements, given our status in the Eastern Hemisphere.

Senator Evans. I am not suggesting Mexico might be the only one. I was just using that as an example of the process. And Egypt might well be another nation where that might be applicable.

We have not talked about the Soviet Union. What in your view is the result on the Soviet Union of these current gyrations in oil prices, both in their relationship to the Western World and even to some of these compound countries?

Dr. Schlesinger. In my testimony, I dwelled upon the unfavorable national security aspects of a sharp drop in oil prices. But, Senator Evans, you have brought about one of the favorable aspects. Soviet foreign exchange earnings are going to drop precipitously. The opportunity that the Soviets will have to import foreign technologies, foreign capital equipments, will be reduced. It will put domestic pressure on the economy, including military expenditures.

The overall impact on the Soviet Union offsets some of the unfavorable national security aspects that I mentioned earlier; that overall unfavorable impact is short term and we must live in the long term as well.

Senator Evans. One more. I presume that it would also be relatively short term. We have seen what we hope will be beneficial results from the sharp rise in the value of Japanese yen which I would judge is going to be largely offset in terms of the potential in the import/export balances with Japan, as far as they are concerned, by the drop in oil prices.

Should we, with that drop in oil prices, encourage Japan—I use "encourage" in its most intense application—encourage Japan to embark on foreign aid to help with countries like Mexico, with some of the other people who are now under great stress because of oil pricing declines?

Dr. Schlesinger. I think that Japan should be strongly urged, strongly urged to do more than it has in terms of its international responsibilities. Japan is no longer the defeated and weak country that it was in the 1950's.

Senator Evans. Thank you, Mr. Chairman.

Senator Murkowski. Thank you, Senator Evans.

Mr. Secretary, I want to commend you first on your testimony. I think it has been very helpful in enlightening the committee.

I would like to go back to some of the points that you touched on and perhaps you can elaborate on a little further. Other than the possible changes in the Tax Code which you commented on, the political realities of that particular alternative, what would be your attitude toward other legislative remedies? For example, the impact of repealing the Fuel Use Act or deregulating natural gas?

That has been something that has come up, that has been discussed informally. Do you see these as relieving the situation?

Dr. **Schlesinger**. I think that substantial modification of the Fuel Use Act is in order for the Congress. I would be inclined to strike down most of the restrictions on the use of gas, with one exception, and I think that that may be necessary, and that is no pure gasified utility plants. I think that that creates too much vulnerability in the long run.

But the restraint on industrial use, major fuel burning installations and the like, I would be inclined to strike down.

The elimination of the price controls on old gas I think is marginal to the long-run energy problem. That causes a major concern for those who own old gas. My own experience, Senator Murkowski, from the 1970's is that the political interests in the retention of price controls gradually fall away. And as the American supply of oil from abroad fell below 30 percent under price controls, the society was quite amenable to that. I think that that will happen with regard to natural gas as well by the late 1980's; that the purpose of those controls will have pretty well attrited, and resistance will have disappeared. And I am not sure that it is worth the investment of political capital in 1986 for what has a marginal effect on drilling activity.

Senator **Murkowski**. So you are saying that it is not really worth the effort to pursue deregulation at this time as far as its being a significant factor.

Dr. **Schlesinger**. The problems of gas are the gas bubbles, so-called, and the dropping oil prices that are significantly cutting gas markets, and excess capacity is going to preclude much drilling activity.

The producer has no problem getting full market price for the production. That is not a consideration for him. What is a consideration is whether he will be able to sell his gas and at the moment he is quite doubtful about that. That is why the number of drill rigs is down to 1,248.

Senator **Murkowski**. I appreciate your opinion on that because having been a member of this committee when the chairman took up gas deregulation, and participating in a good share of the 25 or so meetings of the committee, there was a noticeable lack of consensus among the various gas industry groups. It was apparent at that time that they could not get a consensus and we certainly do not want to initiate an exercise that would be less than a resolve and hopefully a measurable relief.

That is why I appreciate very much your opinion.

Dr. **Schlesinger**. Senator, the old gas price is kind of a subsidy or cushion for new production or cheaper transportation. Before you arrived in the Senate, there was of course the Alaskan natural gas transportation system under discussion and it was our intention at that time to use the implicit subsidies from cheap interstate gas to help fund that transportation system from your State.

Senator MURKOWSKI. Well, unfortunately, Canada more or less replaced the source of supply. We hope that is not forever.

I have a question with regard to our dependence on the Persian Gulf oil which is about 2 percent of our total consumption of crude oil, and we are down from previous highs of about 35 percent oil imports in 1973 to about 27 percent in 1986. But the point specifically is that there are those that suggest that since our dependence on the Persian Gulf is only 2 percent or thereabouts, that the United States is invulnerable to an oil supply disruption which originates in that part of the world.

I do not think so. It is obvious to me that the chain of events that occurs as a consequence of the activity over there, since most of the rest of the world is dependent on it, is an obvious situation. But from the standpoint of energy, military, diplomatic, and international security perspective, why does the United States have to be so vulnerable as a consequence of their dependence of only 2 percent on that part of the world.

One could argue, well, let us drop that 2-percent dependence and go buy it from somebody else.

Dr. SCHLESINGER. I think that there are two answers. The first is that while the numbers that you have cited about the sharp decline include oil imports from the Middle East are accurate, they understate dramatically our dependency upon the Middle East.

Since the end of the Entitlements Program which provided a form of protection for the domestic refining industry, while crude oil has dropped off sharply, product import has risen quite sharply, and if you examine where the crude oil sources of that imported product happen to be, it comes out of the Middle East.

If we are importing gasoline or diesel, that comes out of the Persian Gulf and is refined in Rotterdam or in Italy. Our indirect dependency on the Middle East continues even though it is not crude oil.

So I think that those data frequently cited are, to some extent, too optimistic or misleading.

The second point, Senator, is the most significant one. The Persian Gulf is the swing production area. Just as most of the decline in world oil output with the recent decreases in demands have hit the Persian Gulf, we are on the verge of an upswing in oil demand.

Senator Rockefeller mentioned conservation earlier. The fact of the matter is, we are going to see sharp increases in domestic use, not only in utility boilers, but in terms of the transportation industry to which Senator Evans referred.

And just as the Persian Gulf is the swing producer in the downward direction, it is the swing producer in the upward direction. And by the middle of the 1990's, if one projected current prices and current trends, our dependency on the Persian Gulf would probably be for 40 percent of our total oil.

Senator MURKOWSKI. You indicated that from the political base, the likelihood of an oil import fee is thin. I wonder if you can elaborate a little bit more on policy implications of an oil import fee vis-a-vis a tax of some kind on the refined product.

Is it good, bad, indifferent, in spite of the political realities associated with the public's perception on what it would do to level off the decline that everybody is assumed enjoying?

Dr. **Schlesinger**. From the standpoint of its effect on the domestic producing industry and the offset to the devastating impact to the drop in oil prices, it is the best alternative available.

Senator **Murkowski**. Which one of those?

Dr. **Schlesinger**. The oil import fee.

Senator **Murkowski**. But that would give a tremendous initial windfall, in a sense, would it not?

Dr. **Schlesinger**. It would offset an even greater windfall loss with a smaller windfall gain for the producing industry. The producing industry is looking at a drop from $30 to, let's say, $12 or $15 a barrel. If this boosted the price up to $20 a barrel or $22 a barrel, indeed their pain would be alleviated by the generosity, as it were, of the law, but they would still be undergoing considerable turmoil compared to their expectations of just 2 years ago.

Senator **Murkowski**. Would you cap it?

Dr. **Schlesinger**. Oh, yes indeed. I would have that float up and down, depending on the international oil price.

Senator **Murkowski**. And it would theoretically come off at a certain price?

Dr. **Schlesinger**. Yes, indeed.

Senator **Murkowski**. I would just like to hear your points of view on the application of the tax on refined products, vis-a-vis crude oil. You said it is more applicable on crude oil imports as opposed to refined petroleum products.

Dr. **Schlesinger**. Senator, my comment was not a choice of the oil import fee. I said that was the best from the standpoint of the domestic industry because it would provide protection.

I did not mention the offsetting features. In the first place, you have consumers in the Northeast, heavily oil-dependent, who have been undergoing some tribulation and they think that this is their moment of relief, and that relief would be snatched away, but it will not be snatched away by the U.S. Congress, I think, because there is plenty of representation from the oil consuming areas.

Moreoever, this places a very great burden upon the petrochemical industry. And the petrochemical industry would have to be given an exemption or else it would be embarrassed vis-a-vis foreign competition in a period that the United States generally is subject to those problems.

It also raises the posibility of a new entitlement system which does not stir universal applause in the society at large, in the oil industry particularly.

So I think that it has some severe downsides; but the main point when it came along some weeks ago, it was viewed as a painless way of helping the industry in getting revenue. As one examines this more carefully, the drawbacks are clearer.

I have always been in favor of placing a higher tax on gasoline.

Senator **Murkowski**. Now, when you say "in favor of" as opposed to the oil import fee, I would just like you to highlight why you feel that gasoline is the appropriate place to put the tax.

Dr. **Schlesinger**. I am tempted, Senator Murkowski, tempted by the oil import fee. I backed away from it at first because of the lack of a political base; secondly, because of other economic consequences. But I recognize that the temptation is there because I think the domestic oil industry is under severe pressure and I would like to see that done.

But for practical reasons, I back away from it. I think the tax on oil products does an industry no good at all. It solves the budget problem and provides some help on the budget problem, but it does not do the industry any good.

When I indicated that I have been in favor of it, I have been in favor of it basically for budgetary reasons and for conservation reasons. But it does not help the industry at all. And I must say that as one who had the pleasure of suggesting a rise in gasoline tax by up to 50 cents a gallon in 1977 and presenting it to the U.S. Senate and the U.S. House of Representatives, I do not envy whoever might be forced to follow in my footsteps.

Senator MURKOWSKI. Are your scars still evident?

Dr. SCHLESINGER. They are still bleeding. [Laughter.]

Senator MURKOWSKI. Well, my last question—and this I think addresses what the committee hopes to garner from these hearings—is what is the best method to maintain an incentive within our domestic industry to get us over whatever tenure this exposure is?

You suggested, and I think to quote your words, perhaps an increased depletion allowance as the price falls. Now, since we have explored both the tax on the gasoline refined product, the reality that the political situation is such that it would be very difficult to pursue an oil import on the crude, I wonder if you would explore a little more how you see the selling of a depletion allowance as price falls, because this appears, at least just in our conversation, to be the bottom line of what might be plausible.

Dr. SCHLESINGER. Senator, it is not just the depletion allowance. I was using that as an example. Use the Tax Code generally as a way of stabilizing the industry. Now, the disadvantage is that it runs against the grain of the reform proposals that come out of the Treasury and the spirit of those reform proposals.

The advantage is, you just happen to have a tax reform bill being released today by Senator Packwood, I believe, and that this is a subject that is front and center before the Senate. I would use the Tax Code to stabilize the industry and that means the tax benefits would increase with a drop of the international oil price and would correspondingly diminish as the oil price rise into the $30's, and $40's, and $50's, as they will in the 1990's.

The great advantage of that is that it can be done without the impact on the petrochemical industry and without the issue of this reestablishment of an Entitlements Program and so on.

The way that it is done politically, it seems to me, is to have permanent legislation, and that the industry come forward and say we would like to have a flexible arrangement in the Tax Code based upon offsetting the gyrations of the international oil price.

Unless the industry is prepared to take the disadvantages with the advantages, it is just not politically salable. And if the oil price is $40 a barrel, the industry does not need benefits in the Tax Code. When it is $12 a barrel, it is necessary if that industry is to survive.

Senator MURKOWSKI. Well, I very much appreciate your view of various alternatives. I think it may be appropriate and I intend to suggest to the chairman, Senator McClure, that the committee look at the propriety of considering your suggestions with the question of whether or not the committee should, based on a consensus, consider a recommendation of the Finance Committee with regard to some specific legislative changes that will direct stabilization of the domestic industry through depletion allowance and other potential tax incentives.

The other alternative is simply to put the exposure on the American consumer.

Dr. SCHLESINGER. Senator, if I may make one observation. At the time that the House bill was put forward, the Rostenkowski proposal would take $9 billion in benefits away from the industry; I believe the bill passed the House with $3 billion.

I would point out first that when that bill came forward, the price of oil was still $28 a barrel. It is now $12 or $15 a barrel and therefore what may or may not, depending on your point of view, have been appropriate then may be inappropriate under our present circumstances.

There is, of course, the whole question of legislative strategy It occurred to me as a possibility that the House may have done this in order to be in a better bargaining position with the Senate conference committee, but I will merely reflect on that.

Senator MURKOWSKI. We very much appreciate your recommendation. I think it is a clear recommendation.

Senator Rockefeller, do you have any further questions?

Senator ROCKEFELLER. I just have one philosophical question I want to ask, recognizing there are other panels and Secretary Schlesinger has been very patient, and the other panels have been very patient.

The question of competitiveness in this country I think is of substantial worry. A lot of people are advising businesses now, American businesses to locate offshore, to take their jobs elsewhere. Steel has declined by about 50 percent in terms of jobs.

We are told that it is critical for us to have the instinct for the long lead time, the relationship between research and development, making the investment now, knowing that it will not pay off for another 6 or 8 or 10 years; but you have to do it now if you are going to be competitive out in the future. There is a great temptation to conclude that we have an opportunity for a number of years when oil prices are low and that the stock market, as you indicated earlier, is booming and there is a sense, as you put it, of euphoria, even though it may only be for a number of years.

Competitiveness, our willingness to compete, our ethic of competition, all of those things have to be done—labor/management relations, to improve those—education, the instinct to get into research and development and spend money on research and development and in any terms, much less within the context of Gramm-Rudman and fiscal restaint. It seems to me that competitiveness is still the top issue, energy crisis or no energy crisis in this country.

Now, you indicated that the stock market was doing very well, and it surely is. American business had another opportunity 5 years ago, at the time of the tax cut, to invest; that is, to make itself more able to compete, to aggressively look toward the future, because that was a substantial tax cut. There was predictability built into it. And it declined to take advantage of that.

The usual example given is U.S. Steel. U.S. Steel, instead of investing back into U.S. Steel, bought Marathon Oil and that was a $6.2 billion expenditure, and I suppose that was good for their stockholders, but U.S. Steel is now 65 percent oil and gas and 35 percent steel. And is that good for America's ability to compete? And the answer, of course, is no.

Now, we did not take advantage, I would suggest, during the 1981 tax cut in terms of industrial decisionmaking, capital investment decisionmaking. We did not take advantage of that to position ourselves years down the line to compete more effectively with Japan, Korea, and Germany and other countries to which we are yielding $3 billion a week on the trade front

Here we have another windfall and that is a booming market, a general sense of well-being in this country.

Do you see instincts on Wall Street, and would those who make investment decisions, capital investment decisions, those who determine whether or not we are going to be competitive 5 or 6 years down the road, or more competitive, take advantage of this boom and invest in the future?

Dr. SCHLESINGER. No; generally speaking, the financial community, Wall Street, are very indifferent to the relative strength of the United States vis-a-vis foreign competitors. They go where the rate of return is highest.

I would not expect that to change. I think, Senator, that you put your finger upon the single most important long-term issue. In the past, there has been a natural protection for the United States as a high wage area, in that capital did not flow freely. It did not flow freely to low wage areas. Now capital can flow freely to low wage areas, and from the standpoint of the corporate bottom line, it will flow with perhaps some twinge of regret about the good old American industrial base that is fading away, but that capital will flow.

The only thing that will change that is careful thought, careful thought, which will not take place in the current boom, but will be a reflection of a longer term policy as to how the United States can remain the high wage area with high incomes for the generality of the public, for the average wage earner, and still maintain the U.S. competitive position.

That is an immensely difficult problem under conditions in which the structure of the international economy has been radically transformed since the post-war period.

Senator ROCKEFELLER. Thank you, Mr. Chairman.

Senator MURKOWSKI. I think, Dr. Schlesinger, that your testimony has been very helpful as we reflect on what our alternatives are. As a committee, I would urge my colleagues to reflect indeed on your suggestions. I feel that we do have certainly a very real obligation to examine as we begin the debate on the tax legislation, the merits of an appropriate utilization of the Tax Code as an incentive for our domestic industry during this difficult time, simply to ensure that the burden ultimately does not fall on the American consumer.

The input from the industry is going to be necessary because OMB and others are going to be concerned with the potential consequences of the lost revenue. But it would seem to me that the consequence of your testimony and that of others, the continuity of maintaining a viable domestic industry and the contribution of that to our tax base is more worthy than the unknowns that are occurring even now as we reflect on the merits of substantial rate reductions, stripper well production, and the destabilization of our support industries.

I think there is a potential cure. I would request that you, at your time availability, consider working with the committee on the development of an appropriate Tax Code. Would you be willing to assist us?

Dr. **Schlesinger.** Yes, sir.

Senator **Murkowski.** We appreciate that. There is only one bit of housekeeping, and it is an issue that I had not raised. Senator Rockefeller did not directly mention it, but he alluded to it. I have not directed oil as it applies to Alaska, but in view of the fact that about half of our current production, 800,000 barrels out 1.6 million to 1.7 million moves clear around through the Panama Canal to the west coast, I am wondering what your comments might be on permitting the export of Alaskan North Slope crude out of the United States to markets on the Pacific Rim, if indeed we could pick up imports from Mexico and produce that transportation charge.

Do you think that would ease or have any application in the current scenario?

Dr. **Schlesinger.** Less so in the current scenario. It is a desirable thing to do certainly in terms of improving the efficiency and lowering the cost of transportation arrangements.

As you may know, I suggested that to the Congress some 7 or 8 years ago and was battered by your colleagues particularly on the House side. The notion of exporting Alaskan crude was repugnant at that time.

The industry has put in place a transportation system and the advantages of such exports, while still there are less than they would have been as your production rose from essentially zero to 1.8 million barrels a day. That is not to say it should not be done, but the advantages are less than they once were.

Senator **Murkowski.** Thank you.

I am sure there will be other questions that may come from other members. Again, Mr. Secretary, we want to thank you for your availability and your excellent testimony. It has been most helpful.

To assist in the movement of our hearing, I would ask that panel 1 and panel 2 be combined and I will call Mr. John Lichtblau, president, Petroleum Industry Foundation of New York, who will be joined by Mr. G. Henry Schuler, director of energy programs, Georgetown Center for Strategic and International Studies here in Washington. Representing the finance community, Mr. Robert B. Albertson, first vice president, Smith Barney Harris Upham & Co. in New York.

They will be joined by Mr. John Elting Treat, executive publisher, Petroleum Intelligence Weekly of New York. As a member of the Intelligence Committee, I will be looking for something to report to my colleagues.

Mr. Gene T. Kinney, editor of Oil and Gas Journal, Tulsa, OK. I usually learn about what is happening in my own State industry by reading Mr. Kinney's commentaries.

Mr. Llewellyn King, publisher of the Energy Daily, Washington, DC, where I learn the rest of it.

Gentlemen, we wish you good morning. We appreciate very much your patience. You may proceed.

## STATEMENT OF JOHN H. LICHTBLAU, PRESIDENT, PETROLEUM INDUSTRY RESEARCH FOUNDATION, INC.

Mr. Lichtblau. I would like to read an abbreviated version of my statement, Mr. Chairman.

Senator Murkowski. Your entire statement will be entered in the record. We do appreciate brevity, as we all know. You are familiar with the bottom line.

Mr. Lichtblau. If the effectiveness of a cartel can be measured by the difference between the cartel price and the market price, OPEC was a rousing success. The $12 to $13 a barrel they dropped since last December reflects the shift in price determination from cartel administration to market forces. It has completely wiped out all the increases of the 1979-80 OPEC price explosion, plus about half of the increase of the 1973-74 explosion.

The key question for the near term, the next 3 to 4 years, is whether the market will determine prices or whether OPEC will make an effective comeback. I would like to discuss briefly both aspects of this question.

Given OPEC's historical success, the economic rationale for reviving it seems obvious and the technique of doing so relatively simple, but the noneconomic and perhaps nonrational factors potentially blocking such action are quite considerable.

In 1985, OPEC's worst revenue year since 1980, every member still earned substantially more than it will this year if prices remain at their present level. This applies even to Saudi Arabia which triggered OPEC's downfall, but was not the cause of it.

If an administered reduction in OPEC exports were to cause a disproportionate increasing in prices, Saudi Arabia would benefit from this action along with every other OPEC member. OPEC is apparently producing about 17 million barrels a day in the first quarter. If it were to reduce this volume by 9 percent to 15.5 million barrels a day, available supplies would probably become sufficiently reduced to cause oil prices to rise by a multiple of 9 percent.

Perhaps the group will actually move in that direction at its extraordinary ministerial meeting next week in Geneva. But there is a strong possibility that it will not move far enough. One reason is the persistent insistence of Saudi Arabia, which is opposed by several other OPEC members, that unless non-OPEC exporters share in the burden of carrying excess producing capacity, OPEC will not reduce its output at all.

Perhaps even more thorny is the problem of allocating any OPEC output reduction among its members.

Finally, there is the familiar problem of maintaining intra-OPEC discipline for any extended period of time. Thus, an apparent agreement to share output reductions may not mean that it will actually be implemented on an ongoing basis.

Over time, OPEC's internal problems may be worked out and direct support from some non-OPEC exporters may be forthcoming. How much will prices rise under this scenario? Probably in the next several years, nowhere near last year's level. There are indications that Saudi Arabia and the Gulf shiekdoms would actively oppose an increase of that magnitude because it conflicts with their long-term interests as the world's lowest cost oil suppliers.

A recent French press interview with the Kuwaiti oil minister is interesting. It predicted that the world price of oil would stay around $18 for the next 3 to 4 years.

Now, to my second point, the price of oil under free market conditions. Here we must differentiate between short- and long-term equilibrium prices. The first is the price necessary to bring forth all required production from existing oil deposits. The second includes the cost of replacing depleting reserves.

In the United States, the so-called surrogate finding cost of oil and gas averaged $10.40 a barrel of oil and gas equivalent for the period 1980–84. Production costs on the same basis may have amounted to $3 to $4 a barrel. These figures indicate that the current wellhead price of about $15 is probably below the price required to replace depleting reserves, since it includes neither profit nor allowance for severance taxes.

On the other hand, it is nigh enough to permit continued production for most existing oil and gas deposits. In fact, the short-term equilibrium price could drop substantially more. We are already seeing the result of the price decline in the form of a very substantial reductions in exploration and development expenditures. This is hardly surprising with a $10 a barrel average drop in wellhead price and a somewhat smaller drop in gas prices.

Gross production revenues will fall by more than $50 billion over the next 12 months or by 40 percent from last year's total. In the period 1974–79, when oil prices were much higher in real terms than they are now, oil drilling was insufficient to prevent an average annual decline in the lower 48 production of nearly 300,000 barrels a day.

In the period 1980–85, production stabilized as the 1979–80 price increases brought about a higher drilling rate. If world market prices prevail, we are likely to return to the decline of the 1970's, but at a more rapid rate.

On the demand side, the lower prices are increasing oil consumption both because of the resulting general increase in economic activity and because of fuel switching from coal and gas to oil.

In the electric power sector, unused oil burning capacity is sufficient to triple last year's oil consumption of 430,000 barrels a day. This is a theoretical maximum which will not be reached. But if residual fuel oil prices go below $12 a barrel, fuel switching becomes quite substantial. Of course, any gain by oil by fuel switching is reversible. If oil prices rise, these gains may be lost again.

Our scenarios indicate that whether OPEC gets together again or whether market forces prevail. The price of oil during the next several years is likely to be substantially below that of the next last several years. The resulting increase in demand and decrease in production will inevitably raise our import levels.

Last year net oil imports amounted to 4.1 million barrels a day. By 1990, it could well be around 7.5 million barrels a day, even if prices do not go to the lowest level discussed here.

Higher oil imports at declining prices are not per se against the national interest. On the contrary, by reducing all energy costs, they stimulate economic growth. However, the other side of the coin is the unavoidable negative impact of the lower prices on all domestic energy revenue and production as well as the ensuing higher dependency on foreign supplies. The energy debate will once again revolve around the question: At what point, if any, do the negative aspects of higher imports outweigh the positive aspects and what, if anything, should be done about it? Some of us have been there before.

Thank you very much.

[The prepared statement of Mr. Lichtblau follows:]

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# FREE MARKET VS. OPEC

## Some Key Factors in the Near-Term U.S. and World Petroleum Outlook

Statement before the
Committee on Energy and Natural Resources

of the

United States Senate

by

John H. Lichtblau
President

March 14, 1986

If the effectiveness of a cartel can be measured by the difference between the cartel price and the market price for the commodity the cartel controls, OPEC was a rousing success until last December when it effectively ended its control by a de facto suspension of its production ceiling in the face of declining demand. But the $12-13/Bbl price drop between the last quarter of last year and the first quarter of this year reflects the shift in price determination from cartel administration to market forces. The drop occurred despite the fact that the operation of market forces is still constrained by the continued self-imposed output restrictions of several major OPEC producers. About 8-9 million B/D of ready excess producing capacity is still intentionally kept off the market, half of it in Saudi Arabia. This surplus oil could be produced at substantially lower cost than most flowing non-OPEC oil. Thus, if the market were completely free of any OPEC intervention, current prices would be still lower.

But even under this less than completely free market, we have witnessed a price drop of truly historic proportions. It has by now completely wiped out all the increases of the 1979/80 OPEC price explosion plus about half the increases of the first OPEC price explosion in 1973/74. Since it was clear in 1973 that prices had to rise substantially in real terms to restore a viable long-term supply/demand balance, the current oil price [redacted] is probably broadly in line with the level that would have prevailed if market forces, instead of the cartel, had shaped the price trend over the last 13 years.

The key question for the near term, that is the next 3 to 4 years, is whether the market will determine prices, perhaps even more so than now, or whether OPEC, possibly with the support of some other exporters, will make an effective comeback. Rather than trying to provide a very speculative answer to this question, I would like to discuss briefly a) what it would take for OPEC to make an effective comeback, and b) what we might see in the next few years if market forces prevail.

Given OPEC's historical success in providing incremental revenue to all its members, the economic rationale for reviving it would seem to be obvious and the technique of doing so relatively simple. But the non-economic, and perhaps non-rational, factors potentially blocking such action are also quite considerable. There is no doubt that in 1985, OPEC's worst revenue year since 1980, every member still earned substantially more oil revenue than it will this year if prices remain anywhere near their present levels. This applies even to Saudi Arabia, OPEC's largest producer, which triggered OPEC's downfall but was not the cause of it. In 1985 Saudi Arabia exported about 2.5 million B/D at $26. This year, if it continues to stick to its 4.3 million B/D OPEC quota, it will export 3.5 million B/D at less than $15/Bbl, if present prices prevail. True, Saudi Arabia's decision to end its swing producer role, move up to its full OPEC production quota and sell its crude oil on a net-back formula tied directly to the market prices of refined products was not based on last year's average output, but on the need to counteract the untenably low export level imposed on it last summer by other OPEC members.

Nevertheless, if an administered reduction in OPEC exports were to cause a disproportionate increase in prices, Saudi Arabia would benefit from this action along with every other OPEC member. Such a relationship between volume and price is quite likely. OPEC is apparently producing about 17 million B/D of crude oil in the first quarter. If it were to reduce this volume by 9% to 15.5 million B/D, available supplies would probably become sufficiently reduced to cause oil prices to rise by a multiple of 9%. A relatively simple step for OPEC and basically in line with its successful previous strategy.

Perhaps the group will actually move in that direction at its extraordinary ministerial meeting next week in Geneva. But there is a strong possibility that it will not move far enough, for a number of reasons. One is the persistent insistence of Saudi Arabia, backed by Kuwait and the other oil producing sheikhdoms (but opposed by several other OPEC members) that unless non-OPEC exporters share in the burden of carrying excess producing capacity OPEC will not reduce its output at all. Perhaps even more thorny is the problem of allocating any OPEC output reduction among its members. Iraq's insistence on maintaining its substantial recent increase and Iran's equally insistent opposition to it are a case in point. The allocation problem is rendered still more complicated by the fact that any reduction would probably have to be made not from the current actual production level of 17 million B/D but from the various members' announced production targets which add up to a total of 18.5 million B/D. Finally, there is the familiar problem of maintaining intra-OPEC pricing or production discipline for any extended period of time. Thus, an apparent agreement to share output reductions may not mean that it will actually be implemented on an ongoing basis.

Over time OPEC's internal problems may well be worked out and direct support from some non-OPEC exporters in the form of production curtailments may well be forthcoming, given the indisputable fact all oil exporters would receive higher revenues from a revival of the cartel. How much would prices rise under this scenario? Probably nowhere near last year's level. There are indications that Saudi Arabia and the Gulf sheikhdoms would actively oppose an increase of that magnitude because it conflicts with their long term interests as the world's lowest cost oil suppliers. A recent French press interview with the Kuwaiti oil minister is interesting in this connection. He predicted that the world price of oil would stay around $18 for the next 3-4 years.

Now to my second point, the price of oil under free market conditions. Here we must differentiate between short-term and long-term equilibrium prices. The first is the price necessary to bring forth all required production from existing oil deposits. The second includes the replacement cost of oil, i.e the cost of replacing depleting reserves. There is generally a very substantial difference between these two types of prices, reflecting the vastly different cost factors.

In the U.S. the so-called "surrogate" finding cost of oil and gas, compiled annually by the well known accounting firm of

Arthur Andersen & Co., averaged $10.40/Bbl of oil and gas equivalent (with the gas converted to barrels of oil equivalent--BOE--on a Btu basis) for the period 1980-84. Production costs on the same basis may have amounted to about $3-4/BOE, excluding all taxes. These are very rough approximations. For example, both finding and lifting costs differ for oil versus gas, and of course among regions and structures. But the figures indicate that the current wellhead price of about $15 is probably below the price required to replace depleting reserves since it includes neither profit nor allowances for severance tax payments. On the other hand, the current price is high enough to permit continued production at an operating profit from most existing oil and gas deposits. In fact, the short term equilibrium price could drop substantially more before significant volumes of flowing domestic crude oil production would be shut in. Most flowing foreign oil could also be produced at much lower prices.

We are already seeing the result of the price decline so far in the form of the very substantial reductions in exploration and development expenditures announced by most U.S. oil companies this year. This is hardly surprising. With a $10/BBl average drop in wellhead revenue (and a somewhat smaller drop in gas prices), gross production revenues will fall by more than $50 billion over the next twelve months, or by 40% from last year's total.

In the period 1974-79, when oil prices were much higher in real terms than they are now, oil drilling was insufficient to prevent an average annual decline in "lower-48" production of nearly 300,000 b/d. In the period 1980-85 the production trend stabilized, as the 1979/80 price increases brought about a higher drilling rate. If market prices prevail we are likely to return to the year-after-year decline of the second half of the 1970's, but at a more rapid rate.

On the demand side, the lower market prices are increasing consumption, both because of the resulting general increase in economic activity, requiring more energy and, hence, more oil, and because of fuel switching from coal and gas to oil which is already underway. In the electric power sector, unused oil burning capacity in existing operating facilities is sufficient to triple last year's oil consumption of 430,000 B/D. This is a theoretical maximum number which will not be reached. But if residual fuel oil prices go below $12, fuel switching from coal and gas to oil in the electric power sector would become quite substantial. In the industrial interstate gas market nearly 1 tcf is consumed in units with dual firing facilities. This is equal to about 450,000 B/D of fuel oil and represents the theoretical maximum switchable capacity in this market. Of course any gain by oil in either of these markets is reversible. Thus, if oil prices rise due to fuel switching and other factors, some or all of the gains in this market may be lost again.

Our scenarios indicate that whether OPEC gets together again or whether market forces prevail, the price of oil during the next several years is likely to be substantially below that of the last several years. The resulting increase in demand and decrease in production will inevitably raise our import levels

Last year net oil imports amounted to 4.1 million B/D, and would have been slightly higher absent last year's substantial inventory reduction. By 1990 net imports could well be in the area of 7.5 million B/D, even if prices do not go to the lowest level discussed here.

Higher oil imports at declining prices are not _per se_ against the national interest. On the contrary, by reducing all energy costs they stimulate economic growth. However, the other side of the coin is the unavoidable negative impact of the lower prices on all domestic energy revenue and production as well as the ensuing higher dependency on foreign supplies and the negative impact on our trade balance. The new energy debate will once again revolve around the question: at what point, if any, do the negative aspects of higher imports outweigh the positive aspects and what, if anything, should be done about it. Some of us have been there before!

Senator MURKOWSKI. Our next witness—and there is a vote on—I intend to be here until the next bell when hopefully one of my colleagues will come over, but we will proceed with the next witness, Mr. G. Henry Schuler, director of energy programs, Georgetown Center for Strategic and International Studies.

Please proceed.

## STATEMENT OF G. HENRY M. SCHULER, DEWEY F. BARTLETT CHAIR IN ENERGY SECURITY STUDIES, CENTER FOR STRATEGIC AND INTERNATIONAL STUDIES, GEORGETOWN UNIVERSITY

Mr. SCHULER. Thank you, Mr. Chairman.

I would like to put a slightly difference emphasis on some of the things that have been said by the two previous, distinguished witnesses here this morning. Dr. Lichtblau has indicated the importance of politics as possibly a barrier or, in his view, a barrier to the possibility of OPEC once again administering prices.

Dr. Schlesinger took the opposite view that politics would be the controlling factor but did not see anything urgent in the coming few years or months. I think that, as I say, I put a slightly different emphasis on that. There is no question that we cannot repeal the law of supply and demand, but it is entirely clear and we have just been reminded that control of the supply side by OPEC, and most especially by Saudi Arabia, is the control over world oil prices.

We should not forget that it was only last November that spot prices were $30 a barrel as a result of Saudi decisions to produce 2½ million barrels of day through most of last year. When they decided to increase that by less than 2 million barrels a day, to the order of 4.3 million barrels a day, prices plummeted to $15 a barrel. So prices went in the course of 3 months from the highest level that they had been since 1982 to the lowest level they had been since 1978.

So, clearly what Saudi Arabia does with respect to production is key to world oil pricing. And as I read the situation, it is clear that Saudi Arabian production decisions are controlled by political elements. It cannot be otherwise because oil and oil revenues are the sole source of Saudi economic growth, political stability, diplomatic maneuvering, military defense, and strategic leverage.

So it seems to me we must look at the Middle Eastern context in which Saudi Arabia is now going to have to make those difficult political decisions.

A starting point might be what people have said are the strategic goals that the Saudis were trying to achieve by declaring a price war and expanding their production. Nobody knows how decisions are made in Saudi Arabia, but it is in the midst of these three elements.

First, there are those that argue that Saudi Arabia had inadequate revenues at 2½ million barrels a day and therefore there were concerns about internal stability and they had to get those revenues up in order to solve those internal problems.

There are those, second, who suggest that what Saudi Arabia is trying to do is to deliberately drive down the price of oil in order to force Iran to the bargaining table. That is the regional strategic goal.

And a third goal that is suggested is that the Saudis at 2½ million barrels a day simply had no leverage in Washington and that they wanted to get the volume of their oil up in order to revive the sort of influence that they had in Washington in the latter 1970's and early 1980's.

Now, I heard Dr. Schlesinger say, and I think Dr. Lichtblau as well, that this was aimed at the United Kingdom and the North Sea producers. I do not think that that is the case at all. I think that it was in fact aimed at the other OPEC cheaters. I think that it was not realistic and I do not think the Saudis are unrealistic, and I do not believe that they thought that they would force the United Kingdom and the North Sea to curtail production, nor do I think they believe that that would have very much impact in and of itself.

It was not aimed at the Soviet Union, another nonproducer, because the Soviet's exports were down 5,000 barrels a day last year anyway. I do not believe it was aimed at Mexico, which has been a better member of OPEC than many former members. So I think it was aimed at the cheating within OPEC. But it clearly made better sense to declare a price war on the North Sea than on your neighbors in Iran and Iraq.

But that strategy has not worked, and those neighbors and the rest of OPEC have denounced that price war vociferously. And it runs from obviously Iran and Libya, to Alergia and Nigeria, and most of OPEC, with the exception of Kuwait.

Senator **MURKOWSKI**. Excuse me. I am going to have to recess. I have got to go vote. I urge you to relax, have a drink of water. I see you all have three glasses in front of you.

[Recess.]

The **CHAIRMAN** [presiding]. The committee will come to order. Gentlemen, I apologize for the delay. I am glad to be back. I am sorry, Mr. Lichtblau, to have missed your presentation. I, of course, have your statement.

Mr. Schuler, we are halfway through your presentation. We will resume at that point, please.

Mr. **SCHULER**. If I can remember what point that was.

I think what I had done was to suggest that the Saudis clearly have control over the supply side of the equation and that indeed this amount to control over world oil prices, and indicated that there are a variety of political considerations that add up to the survival of the House of Saud and that is the key factor in setting oil-pricing policies.

And I suggested that there were three strategic goals that have been attributed to the Saudis in this decision to declare a price war and to expand their own output. The first was a need for greater revenues because of internal security concerns. The second was that they wanted to drive down the price of oil in order to hurt Iraq. And the third was to expand their influence in Washington.

These are the suggested reasons for the Saudi decision.

The **CHAIRMAN**. Did you include in that list the regaining of market share?

Mr. **Schuler**. The regaining of market share is not an end in itself. The regaining of market share is a means, a hoped for means to achieve their goals. Now, if you mean long-term market share for all of OPEC, including the Saudis, yes; there is clearly a long-term goal in that regard. But that was the same long-term goal in the 1970's. They thought prices were getting too high.

But throughout the 1970's, they subordinated their long-term interests to the immediate political threats. They had to accomplish their immediate political goals. In any event, I also disputed something that my distinguished colleague at CSIS, Dr. Schlesinger, had suggested and that was that the Saudi policy is aimed in fact at the North Sea producers.

I just do not think that that is the case at all. I think it was completely unrealistic to expect that the United Kingdom would in fact reduce its output in the face of the Government that was in power there.

So the real target is the cheating of the other members in OPEC, and while the Saudis have attempted to obscure this real target, the other members of OPEC are not buying that, and as a result they are, except for Kuwait, Abu Dhabi, and Qatar, they are critical of the Saudi strategy to declare a price war. And that criticism ranges from the mild from Nigeria to the extreme like Iran and Libya that put it in the context of the whole Iran-Iraq war, and somewhere in the middle lie the Algerians who have described the Saudi move as "the most serious economic aggression that a group of developing countries has had to face since the 1960's. This is Algeria, mind you, not Iran.

In any event, there is a great deal of heat arising out of the discontent of the other members of OPEC. So the Saudis have to ask themselves whether they are achieving any of those objectives that they set for themselves. If their objective was to increase their revenues, they clearly have failed to do so. The King has just announced that the budget, the next annual budget will be delayed for 5 years because they do not know what the revenue situation is going to be, but a calculation of the situation today shows that 4.3 million barrels a day at $15 a barrel generates $64.5 million in revenues for Saudi Arabia.

Last summer, when they found themselves threatened by inadequate revenues, they were producing 2½ million barrels a day at $26 a barrel which produced $65 million a day.

So, all they have achieved by expanding production and reducing price is to lower their revenues by half a million dollars a day. So they are not achieving that objective.

With respect to Iran, if in fact it was true that they were trying to drive down the price of oil in order to force Iran to the bargaining table, that clearly has not worked. Since the strategy began, Iran has captured the two very important salients in Iraq, and as Dr. Schlesinger pointed out, it is no longer beyond the realm of possibility as we once considered, that Iran could in fact break through the Iraqi defenses and we would have a fundamentalist Shiite Government in Baghdad with all the implications that that would have.

With respect to the Saudi policy implications for the United States, it is not going to expand their influence in this town if they create what appears to be a perpetual oil glut and collapse prices. Nobody cares a whit what is going on in the Persian Gulf if that is the case.

So the result is that they have not achieved their goals in the short term, and I dare say that they are not going to achieve them even in the next 2 or 3 years—are they really going to be able to do any good.

So they have to reassess the situation, and in my judgment the only alternative if they have been unable to bully their OPEC colleagues into disciplining themselves, they may find it necessary to bargain with their OPEC colleagues. And the nature of the bargain is clear. Iran, Libya, and Algeria have said restore prices to $28 a barrel and we will discipline ourselves.

Whether that bargain could be lived up to is another question, but the Saudi strategy cannot work as it is presently envisaged, and at least this is a viable alternative.

The **Chairman**. Mr. Schuler, I apologize. It must be terribly disconcerting to be trying to talk to a committee that is not listening.

Mr. **Schuler**. Amen.

The **Chairman**. I apologize for that. We have another amendment offered on the floor and I am going to have to refer to the floor. It is also a matter that involves Mr. Nickles, but he has indicated he will remain for awhile and Chair, and I will run to the floor and see if I can take care of that matter and get back as quickly as I can.

Again, I apologize for the interruption.

Senator **Nickles**. If the chairman would move to table the amendment by the Senator from Ohio, it may save my speech as well.

The **Chairman**. That ought to be a great incentive for the entire Senate. [Laughter.]

Senator **Nickles** [presiding]. I echo that. We have a little provision dealing with Buy America on the oil industry right now that is also pending and we just finished one on OCS, so it is kind of disconcerting because this is a very important hearing for many of us. Yet, we have two or three energy issues that are important on the floor as well.

I was told a few minutes ago that the Buy America provision, once it was coming up, and then once that they decided not to offer it. And now evidently another Senator has decided to offer it, and so it looks like it will be back on the floor. So that is the reason for our conversations, and I apologize.

Mr. Schuler, please continue.

Mr. **Schuler**. I think, Senator Nickles, that as long as my written statement is going to be put in the record, it is unnecessary to take any more time. I know some have luncheon engagements and airplanes, and I think I would just defer to the others and stand on my written statement rather than the interrupted verbal statement.

[The prepared statement of Mr. Schuler follows:]

# The Ingredients of An Unexpectedly Rapid Oil Price Recovery

Testimony before
Senate Committee on Energy and Natural Resources

Hearings on
The International Petroleum Situation

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I appreciate this opportunity to provide the Senate Committee on Energy and Natural Resources with my views on the international oil situation. In doing so I would emphasize that although I now hold the Dewey F. Bartlett Chair in Energy Security at Georgetown University's Center for Strategic and International Studies, the Center does not adopt institutional positions, and this testimony is based, in any event, upon prior personal experience in the Middle East so the views are strictly my own.

## The Critical Importance of Saudi Oil

During some twenty years in that area with the varied perspectives of a military office, embassy official, oil company executive and industry-designated negotiator with OPEC, I had an especially broad opportunity to experience - and, indeed, to worry about - the inescapable links between Middle Eastern politics and oil policy. I am well aware that it is now fashionable to assume that market forces have "inexorably" triumphed over political pressures and/or cartel discipline, but I respectfully submit that there is little basis for that assumption. To be sure, the economic law of supply and demand cannot be repealed, but one country, Saudi Arabia, has recently demonstrated yet again that politically-driven control of the supply side of the equation constitutes control over world prices:

o Those who doubt the importance of Saudi decisions fail to remember that Saudi acceptance of severe production constraints during the first nine months of last year led to

November 1985 spot market prices of $30 per barrel, the highest since 1982, and that subsequent Saudi abandonment of those constraints led three months later to February 1986 spot prices of $15 per barrel, the lowest since 1978.

- Those who doubt the role of politics in those Saudi decisions fail to recognize that oil output - and the resulting revenues - are central to the Kingdom's economic growth, political stability, diplomatic maneuvering-room and strategic leverage, and, therefore, central to the survival of the House of Saud.

The Politics of Saudi Decision-Making

In view of the centrality of Saudi output decisions to world oil prices and the centrality of the politics of survival to those Saudi decisions, it seems to me incumbent upon Congress to examine the contemporary Middle Eastern scene before abandoning interest in U.S. energy development on the false premise of a durable "oil glut" and "price collapse". I believe that such examination will demonstrate that Saudi Arabia's September 1985 decision to engage in a world-wide price war serves to undermine the survival of the House of Saud, and that, therefore, the politically canny rulers will abandon it in the very near future.

We might take as our starting point the varied explanations for the Saudi decision last Fall to reclaim the Kingdom's 4.3 million b/d share of agreed OPEC output through aggressive marketing based on product values. While that assertion of Saudi Arabia's unrivalled oil power would almost certainly serve the Kingdom's long term economic interests arising out of increased global oil demand, that had been equally true during the 1970s when the House of Saud refused to exercise that power because of immediate political threats arising out of regional friction. The important question is why the Saudi princes altered the balance in 1985 and whether they are irrevocably committed to the current strategy?

Although Saudi decision-making is shrouded in secrecy, observers have suggested that the recent policy shift was designed to achieve a number of strategic objectives of crucial internal, regional and international importance to survival of the House of Saud:

o Most have suggested that expanded output was designed to increase revenues, thereby minimizing the threat to internal stability posed by unsatisfied Saudi expectations.

o A few have opined that it was designed to force Iran, the Kingdom's chief regional threat, to the bargaining table through shrunken sales and collapsed prices.

o Still others believe that expanded output was intended to revive the Kingdom's vastly reduced influence in Washington.

Although the Saudis were unwilling to spell out their strategic objectives, they were uncharacteristically direct in proclaiming their tactical plan: to force the non-OPEC producers to reduce their shares of the market so as to make more room for OPEC. There are a number of reasons to doubt the sincerity of that agenda:

o Much non-OPEC oil is consumed at home, as in the

U.S., and it was totally unrealistic to expect that these producers would sacrifice the benefits of supply security, employment, economic growth and foreign exchange savings.

o Most non-OPEC exporters in the Third World, including Mexico, Egypt, Malaysia and Brunei, have been collaborating with OPEC for several years, and Mexico has, in fact, been more committed to OPEC policies than many formal members.

o It was highly unlikely that non-OPEC exporters among the OECD countries, Norway, and especially Britain with its conservative and U.S.-oriented government, would sacrifice their free market principles and commercial promises to companies committed to costly offshore investments.

o It was unnecessary to seek curtailment of Soviet exports because production problems had already reduced them by 500,000 b/d in 1985. Similarly, although the PRC announced a curtailment of export growth for 1986, this seemed to make a virtue of a necessity.

o In the event of success in forcing a non-OPEC reduction, the Saudis - and all of OPEC - would have been forced to face the thankless task of establishing new individual quotas.

Given this situation and the unwillingness of the Saudis to exercise their principal point of leverage over the U.K. - the expensive purchase of military aircraft - it seems likely that the loud finger-pointing at non-OPEC producers was a smoke screen designed to obscure the true Saudi agenda for bullying their OPEC partners into observing their quotas. After all, it made a lot better political sense to declare a price war on Britain than on Iraq or Iran.

That strategem - and concurrent Saudi efforts to cloak their own decision under a fuzzy OPEC claim for a "fair share" of world oil demand - failed to mollify other OPEC producers. With the exception of the Kingdom's equally defenseless neighbors on the Arabian Peninsula - Kuwait, Abu Dhabi and Qatar - most members of OPEC have denounced the Saudi price war. Iran and Libya have been especially vitriolic in this regard, placing the Saudi actions in the context of the Gulf War and threatening a commensurate military response. While refraining from military threats, Algeria - an Arab leader in good standing - has been equally vociferous in its denunciation of Saudi policy. For example the semi-official paper El Moudjahid complained editorially on February 18 that Saudi Arabia had transferred the power to set prices to uncontrollable market forces, led OPEC into a "futile and ineffective" attempt to recapture market share by cutting price in 1983 and conspired with consumers in

> "the most serious economic aggression that a group of developing countires has had to face since the 1960s."

In the face of these threats, the Saudis must ask themselves a series of painful questions:

- Are their strategic objectives being furthered?
- Are their tactics likely to work in the future.
- What are their alternatives?

## Have the Saudis Strategic Objectives Been Furthered?

If they are willing to face the unpleasant truth, the Saudis must admit that they have not only failed to achieve their strategic objectives but actually created a dangerous backfire:

o King Fahd has just announced that the next yearly budget will have to be delayed for at least five months, thereby disappointing those Saudis who had been led to believe that resuming output of 4.3 million b/d would help to revive their sagging fortunes. There is no realistic basis for such hopes because 4.3 million b/d at $15 per barrel provides half a million dollars a day less income than 2.5 million b/d at $26. that is both the beauty and the burden of net back pricing arrangements: they guarantee that the crude oil will be lifted but only by assuring that declines in sensitive product prices will be promptly and fully reflected in the crude oil price. The Saudis could, to be sure, increase output to the facility limitation of nine million b/d, but they are already viewed as excessively greedy in demanding over 25 percent of OPEC revenues for less than two percent of OPEC's population - what would be the reaction if they increased their share to over 50 percent (9 million b/d out of 16 million b/d of total OPEC demand)? If it is true that the Saudi princes were concerned that last summer's revenues of $65 million threatened political stability by exacerbating a wide variety of long-standing domestic tensions, then they cannot be very sanguine about the consequences of current income of $64.5 million.

o Any expectation that Saudi initiation of a price war would force a revenue-pinched Iran to the bargaining table appears to have been dashed by Iran's subsequent seizure of the Fao Peninsula and a mountainous area east of Kirkuk. Those widely separated salients not only serve Iran's military objective of stretching the Iraqi defenses, but they also serve Iran's political objectives of putting pressure on Kuwait in the south and encouraging the Kurds in the mountains. With the main Iranian thrust apparently yet to come and the Iraqi Army, including the crack Revolutionary Guards division said to have been badly mauled by the Iranian zealots, the military situation is hardly reassuring to Iraq's allies. Viewed in the context of regional threats, it hardly seems the time for Saudi Arabia to wage a price war, regardless of its intended direction. The rhetoric rises ominously each day:

> On February 21, Majlis Speaker Rafsanjani said "These countries should always remember that we are now on their border, and they should get used to the neighbor who will stay in his current positions for a long time. Iran will no longer accept that your ports should receive arms shipments bound for Iraq, that your roads should be used to strengthen the Iraqi army, and that Iraqi oil pipelines should pass across your territory."
>
> On February 25, President Khamenei declared "Some countries admit they sell oil for Iraq. Everyone will accept that, if we make the

> decision one day, we can confiscate the oil sold for Iraq."

On February 26, Prime Minister Musavi offered the carrot and the stick, saying

> "Iran wants to live in an atmosphere of peace and cooperation with its neighbors...but we cannot allow other countries to sell oil on behalf of our enemy and transport cargo for Iraq safely through the Gulf waters."

o Last but by no means least, the Saudis are likely to find that their increased oil output has seriously undermined their remaining influence in Washington. With the electorate convinced of a perpetual "oil glut" and "price collapse," candidates for office are much less likely to court the political wrath of those who oppose U.S. support for Arab arms purchases and foreign policy initiatives. Already the Administration has had to abandon the sale of F15s to Saudi Arabia and missiles to Jordan. And, as concerns over oil supply and price continue to fade, there are moves to bar the sale to Saudi Arabia of munitions for armaments which they already possess and even to cancel the delivery of AWACS sold for $6 billion over five years ago. Whether justified or not, growing Arab perceptions of U.S. faint-heartedness is bound to influence the degree of risk to which the Saudi Princes are willing to expose themselves.

In summary then, it appears that the Saudi price war has not only failed to achieve the Kingdom's strategic objectives but has actually heightened the threats which it might have hoped to diminish.

Are the Saudi Tactics Ever Likely to Work?

It must be clear that oil prices of $15 per barrel and less seriously reduce the incentive for new investments in conservation, fuel-switching and high cost oil exploration and production. In fact, that is probably a prospect which we must live with for a number of years even if world oil prices were to return to $25 per barrel tomorrow because it will take some time for oil companies and investors to overcome their fears that what has happened once could happen again. Therefore, to the extent that the Saudis were looking to the long term, it appears that they have already achieved their goal of expanding oil demand five or ten years hence.

But the prospects for short to mid-term Saudi success through forcing the curtailment of output from current investments are extremely slim. Individual producers - especially those operating American stripper wells - will be forced to curtail production, and U.S. imports will rise commensurately, but that will not be anywhere near enough to soak up the surplus OPEC producing capacity if OPEC members are unwilling to restrain output. A variety of commercial, structural and strategic considerations make it unlikely that prices in the $10-$15 per barrel range will shut-in much flowing production outside of stripper wells over the next two or three years. Looking briefly at just two examples of other high cost production - the North Sea and Canadian heavy oil - we find the following

o A recent study of United Kingdom North Sea production cited by Petroleum Intelligence Weekly (3/3/86, p. 5) finds that it is "largely immune to price falls until about 1988" because the government absorbs much of the revenue loss and bankers will simiply have to renegotiate debt repayment schedules. The analysts estimate that the much discussed - but still unlikely - tacit curtailment through extended summer maintenance would remove no more than 150,000 b/d this year.

o A senior Canadian oil industry executive responsible for heavy oil production recently told a CSIS conference that even though oil prices of $10 per barrel would be below operating costs, there would be great reluctance to stop operations because it would be virtually impossible to obtain the unanimous consent of all joint venture partners to incur the $350 million cost of "moth-balling" the plant.

The prospects for short to mid-term Saudi success through reversing the extensive fuel-switching of the past decade are also limited. Coal consumption will remain high as the result of politically-dictated subsidization of European coal production and because of the availability of competitively-priced South African coal. Flowing natural gas can probably keep pace with oil price declines. Capital intensive nuclear plants will not be shut-in. Conservation investments will not be undone.

In sum, reliance on expanding demand is not going to solve OPEC's revenue problems over the next three to five years, and may not even do so in 1990 when there could still be five million b/d of unutilized OPEC capacity. Therefore, the only way in which OPEC can restore balance to oil markets is by restricting supply, but that has proved to be increasingly difficult as oil prices have declined. As noted earlier in the Algerian complaint about Saudi policy, the $5 reduction in OPEC oil in March 1983 only made matters worse by prompting both buyers and sellers to set-off a downward price spiral.

- Oil buyers, hopefully predicting additional price declines, adopted hand-to-mouth policies which made their prediction self-fulfilling as they abandoned term contracts and drew-down inventories to bare minimums.
- Oil sellers, in fearful anticipation of further declines, became even more undisciplined as their per barrel revenues dropped and they sought to increase volume through additional discounting.

Do Saudi Arabia - and OPEC - Have Any Alternative?

It is clear that OPEC's indiscipline puts Saudi Arabia on the horns of a terrible dilemma. On the one nand, accepting the role of swing producer supported prices at $26 per barrel but lowered Saudi output to 2.5 million b/d which generated revenues deemed to be inadequate. On the other hand, renouncing the swing role raised Saudi output to 4.3 million b/d but lowered price to $15 per barrel which generated equally inadequate revenues. In sum, the Saudis' only hope is to restore OPEC discipline, but their efforts at "bullying" have failed so what is left?

Having seen the failure of "bullying," the Saudis may have no choice but to resort to quiet "bargaining" with OPEC's hawks:

Iran, Libya and Algeria. The elements of the "bargain" are relatively straight forward: in return for restoration of OPEC discipline at 16 million b/d, Saudi Arabia would support restoration of the $28 per barrel price sought by the hawks who contend that higher prices encourage greater discipline. As currently allocated, the 16 million b/d includes 4.3 million for Saudi Arabia, but this might have to be reduced by 500,000 b/d to accomodate Iraq. Although the prospects for the success of this tactical reversal are far from certain, we must not forget that Saudi Arabia may have other reasons for attempting an accomodation with Iran. Moreover, the alternative of continued price collapse and rising regional and OPEC resentment is unacceptable.

There is little doubt that Saudi cooperation with the hawks would support much higher prices than currently prevail in the market place because

o OPEC continues overwhelmingly to dominate that portion of the world's oil production which is available for export. During the first half of 1985 (the latest statistics available in the Energy Information Administration's January 20, 1986 edition of the "International Petroleum Statistics Report"), OPEC still provided two-thirds of the 15.4 million barrels per day (b/d) of oil imports which OECD members had to purchase to meet demand. If the 1.5 million b/d of OECD imports from Mexico are added in recognition of our neighbor's full cooperation with OPEC policies, the share of OECD imports provided by OPEC members and collaborators rises to over three-quarters.

o If OPEC members and collaborators were to reduce their exports, markets would inexorably tighten. Although there may be 10-12 million b/d of unutilized world oil production capacity which could be made available within thirty days, virtually all of it is controlled by OPEC members and collaborators. There is no unutilized capacity in the North Sea, none in the USSR, none in the Peoples' Republic of China, none in the United States and none in Canada. Nor would oil-in-storage alleviate an OPEC-induced shortage for long because OECD commercial inventories are at their lowest level since 1973, and government stocks are intended for use only in a dire emergency. It should also be noted that the vast volumes of unnecessary oil consumption which could be wrung quickly out of the system during the OPEC-induced shortages of the 1970s are no longer available thanks to mandatory automobile efficiency and investments made in conservation and fuel-switching when oil cost $40 per barrel and was expected to rise rapidly. In sum, the industrial world has no really viable option if OPEC members were to restrict the volume of oil which they made available for export.

## Conclusion

While no one can be certain of how quickly oil prices will turn around - or how high they will rise - we must not ignore the clews provided by Middle Eastern politics. We have been warned of the disparate oil pricing views of Iran and Saudi Arabia so a shift in the stalemated regional balance of the last four years could produce a sudden turn-around in oil prices. It is, in summary, no time to relax our efforts to encourage domestic energy development.

Senator NICKLES. I will go through the entire panel before I ask individual questions, but your comment dealing with the Saudis and their production; you are figuring their production today at what, about 4½ to 5 million?

Mr. SCHULER. Something like 4.3, 4.5 million barrels a day; that is right.

Senator NICKLES. Mr. Albertson.

## STATEMENT OF ROBERT B. ALBERTSON, FIRST VICE PRESIDENT, SMITH BARNEY

Mr. ALBERTSON. Thank you, Senator. I have also submitted all of this in writing for the record.

I want to make sure the committee is aware of my limitations. I am a securites analyst so I am basically an outsider to the industry and I will not have the hard data on specific credits and specific banks to really give you an accurate assessment of where the problem is going to be. You should be able to obtain that information much more effectively when you meet with the regulatory authorities.

Second, I am not an energy analyst, I am a bank analyst, so I am relying on a lot of peripheral knowledge of this industry's threat to my industry.

Let me outline briefly what I have in writing. The principal risk to the banking system, of course, is loan losses related to energy sector, or creditors. There are two types of problems and there are three categories of borrowers. In terms of the problems, the first is a direct loan loss due to bankruptcy where there is some offset if there is collateral, and the second problem is nonperforming assets. There are essentially renegotiated or restructured situations that still burden the lending institutions over time.

The former is more immediate and more dramatic to the bottom line, of course. The three categories of risk directly: First would be the companies, both majors and independents. The former tend to be well integrated and diversified and should not experience problems in terms of energy pricing except under extreme circumstances.

The second group, the independents, is quite another matter. They are directly impacted by oil prices and so are their credit quality. I would say anything below the top 22 energy companies are in this category.

There is another grouping and that is project lending where really there is no recourse to the parent. The bank is at risk to the project, and hopefully they did their homework well.

With production and reserve base lending in general, most banks have lent at roughly 50 percent of the energy-reserve value through a variety of formulas. In theory, that means that if prices drop in half, the banks are still all right in terms of being paid out.

In practice, it is probably not even that bad because they also put into the equation interest costs, and if interest costs to service the debt are going down, they could probably withstand even worse pricing. But again, that depends on the initial price assumptions that these loans were made.

Right now, that pricing assumption is about $20 to $23 a barrel, staying flat for about 5 years and rising 6 percent per annum per after, and that is roughly what banks are looking at in their lending policy. That is much lower than it was back in 1980 and 1981; 1980 and 1981 was the period in which a lot of the production loan problems may have begun.

Today the banks routinely test their portfolios to withstand pricing in the $15 area. Some are beginning to go lower than that but not yet. A year ago that test price was $20, $23. I would like to point out that in all cases the banks will tell you the absolute price is not so relevant. What is relevant is the speed with which that price might be reached.

Twenty dollars in 5 years or $15 or $10 in 5 years is not so concerning because they can always go after more collateral. They have longer to get the loan paid back. But a precipitous drop such as we have had is truly a horse of a different color.

I should also mention most of the lending is in the gas area, over 60 percent in terms of production loans; not oil.

The second grouping of risk is much more amorphous to scrutinize but I can assure you much more prone to bankruptcy and problems for the banks, and that is the service industry, certainly to include the drillers, the supply companies, the well service suppliers.

Here there is just no simple quantitative means by which banks can assess what their potential risk is at a given price of oil. The only thing that is relevant here is the future capital spending plans of the energy industry, and I should say up front that if oil prices were to go up tomorrow and up substantially, I doubt that much of the damage that has already been done in the service supply and drilling sector could be reversed, and if you will we have already got baked-in loan losses of enormous consequences from that sector right now.

This sector, incidentally, was the area that provided most of the banks with their problem loans last year in terms of losses and it is going to continue to be the main sector this year. The problem is, part 1, that there is not much in the way of collateral in these types of credits. And part 2, is that the names are getting bigger. Witness the recent bankruptcies of Global Marine and Smith International.

The third area of risk for banks would be the developing countries. Most of the focus is now on Mexico where oil revenues dominate their current accounts and high foreign debt loads are burdensome to those current accounts.

I should note, however, that in general the LDC debt problem had as its roots most likely the rise in oil prices, particularly the second phase of that rise in 1979 and therefore I think a reversal of that is to their good, not detriment.

I would note that there are about $800 billion of debt to the developing world. About half of it is in the hands of the private banks throughout the world, and perhaps only $40 to $50 billion in grand total, considering all oil-producing developing countries, or non-OECD members is at risk.

I want to focus on Mexico for one moment because I think the problem has been somewhat overblown in terms of recent press and that is that there is a rule of thumb on Mexico that for every dollar per barrel, you lose roughly $500 million per annum; but for every half point interest rate move, you can offset that very amount.

We have already gone down in terms of interest rate and spreads very close to 5 percentage points. In theory, then, Mexico could go from 1 year ago at $26 a barrel to $16 today without one iota of problem. Obviously, there has been a crisis call long before we got to $16. I think the committee should be aware that there are other problems.

First, of course, when prices decline, countries such as this obviously pull back production temporarily until there is a stability in price. That hit them last year; it hurt their current account; but it recovered very quickly. We are in the same situation again right now.

Second and most importantly, Mexico's problem is more of capital flight. The country has lost $16 billion in the last 3 years roughly, money being moved out of the country from the private sector. That is the issue. Energy may be an instigator to that problem, but I want the committee to understand at least from my point of view that Mexico has a lot of steps that it could take to offset the problem they are in right now. They are not completely at mercy to the oil-price market.

The risk to the banks is not so much a loan loss from developing country loans but rather problems related to sharply reduced interest rates if the oil exporters demand and get such concessions. That is a problem that could start a precedent that goes beyond the oil exporters.

Let me quickly assess then the potential damage from these three sectors. I will differentiate between two types of banks, a large money center multinational such as you would find in New York, and an energy emphasis regional such as you would find in your own geography center.

I have done a great deal more detail in the written remarks. Let me just summarize here that a large money center typically has about 6 to 8 percent of its total loan portfolio in energy related. Sixty percent concentration in a troubled area can create a tremedous problem for a bank, but I would say in that 6 to 8 percent, the money center only has about 10 percent at risk in the oil service supply drilling sector: the hardest hit.

Six-tenths of 1 percent is probably the problem right now. My conclusion would be that in this group you are going to see some incremental loan losses this year; unpleasant but certainly not devastating. You are going to see increasing nonperforming recognition. Again, I do not think it is going to be a crisis. Third, you are going to get some psychology that will go negative in terms of more major name bankruptcies. That might disturb funding for a short period but I do not think that is going to be a crisis. And finally, I can even adjust down all the developing world spreads a couple of hundred basis points and still come out only hurting their bottom line, the money centers, at about 15 percent, although the range is much broader than that depending on the bank.

The situation is much worse, however, in the energy concentrated regionals. There, the typical energy loan portfolio is more in the vicinity of 20 percent of the total and of that 20 percent about 30 percent roughly works out to be oil service supply drilling which is the hotbed right now. If the loan-loss ratio were to double in that sector, for instance this year versus last, which is a reasonable assumption if you want to push forward with $15 a barrel for the next year, you are going to bring several of the southwest regionals down very close to break even in terms of earnings. You obviously have the potential for some failures, and frankly you have the potential for more than just a few small banks in terms of failures.

Let me close with just three short thoughts as to secondary problems related to the financial system and the banks if we have $10 to $15 a barrel oil. First, there are certain regions in the United States that are energy dominated which will suffer credit quality erosion from non-energy-related credits, with affinities to those regional economies. Obviously, I am talking about real estate, but there are several other peripheral suppliers to the energy sector as well.

So the assessment of this damage could go beyond what I have already indicated.

Second, such regions will present municipalities with reduced revenue streams, forcing them to rely more heavily on bond issues and the very takers of those bond issues, the banks, are going to be in a somewhat pained state in order to participate.

Third and finally, with regard to the developing countries, this is a separate issue but an awful lot of progress has been made to date in terms of the IMF restructurings and hopefully the long-term potential for the Baker initiative to take us to long-term developmental solution.

We could lose an awful lot of ground very quickly, however, if there are precedents set and forced restructurings that would negatively impact the banks.

In sum, I could almost grade the entire petroleum situation for the banks with one sentence. And that would be that lower oil prices are almost universally better overtime to the whole group, but only if there is a gradual secular decline.

The principal problem in the financial institutions as it relates to oil is not the price; it is the volatility of the price.

Thank you.

[The prepared statement of Mr. Albertson follows:]

March 14, 1986

# PRESENTATION TO

# THE COMMITTEE ON ENERGY AND NATURAL RESOURCES

# OVERSIGHT HEARING
# ON
# DOMESTIC AND INTERNATIONAL PETROLEUM SITUATION

# POTENTIAL EFFECTS ON U.S. BANKS

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## OVERVIEW:

The Committee has asked me to state my observations regarding the current petroleum market environment's effects on U.S. financial institutions. I have specialized in bank stock analysis for thirteen years. My opinions are my own. Based solely on the publically-available statistics and discussions reflecting the banks I analyze, I am naturally limited to more general observations than might be provided by experienced bankers and regulatory and accounting professionals.

Moreover, I have concentrated only on the larger banks, so-called money-center multinationals, and large regional institutions. Meaningful extrapolation of my remarks to the thousands of U.S. banks and financial institutions is probably inappropriate. I ask the Committee to please keep these practical limitations in mind

However, I believe a few observations can be helpful. First, lower energy prices should be a net long-term positive for the U.S. and world economy. Second, the short-term level of pricing is less significant than its duration. Third, the commercial banking industry exposure to the beleagured energy sector is not uniform. Fourth, the immediate threat may relate more to commercial risk (oil-related corporations) than country risk. In all, I conclude that should energy pricing recover somewhat from its steep decline reflected by recent spot market statistics, then even a secular downtrend ... given sufficient space in time to unfold ... would have only limited negative consequences to a few lending institutions. Should there be no recovery, say to the $20/barrel level by year end, the damage will widen in the form of higher nonperforming (non-accruing or reduced-rate) loan burdens, accompanied by worsening levels of loan chargeoffs than experienced in 1985. Should there be further and permanent slippage to the $10-15/barrel range, then it would be my judgement that a rising number of bank failures would occur among those concentrated in energy-related lending. This scenario would include some larger regional institutions, and would also deteriorate psychology in a handful of net producer countries that would require the employment of unusual or precedent-setting bank loan restructuring techniques ... techniques that might contaminate other developing country restructurings that otherwise would hold fast. This would lead to uncomfortable earnings burdens among the large money-centers, but should not, in itself, threaten strength or survivability in any way. It would have major repercussions in the developing world that is still seeking some near-term private-sector bridge lending to longer-term self funding reliance.

Finally, I would be concerned under this second scenario of significantly lower oil prices on a sustained basis that secondary problems would occur. This includes funding difficulties for energy-concentrated banks, especially any that sustain quarterly operating losses or remain at marginal profitability from incrementally higher chargeoffs and heavier nonperforming carry burdens. This is even more so a vulnerability for those banks with only modest retail deposits and a strong dependence on wholesale funds.

Other secondary problems relate to regions in this country, such as the southwest, that are more impacted from a weakened energy sector. Real estate loan portfolios have already suffered from general economic malaise in these markets, and can exaccerbate overall nonperforming and chargeoff rates. Another problem could stem from state and local government revenue attenuation that would reduce the marketability and acceptance of public bond issues ... especially from the banks and other financial institutions who are major buyers of these securities.

**DIRECT DOMESTIC CREDIT RISKS:** The net effect of lowered oil and gas prices should be positive to the U.S. and world economies. From a bank analyst's perspective, lending risks decline and both profitability and capital strength tend to mirror the general state of the local, national or international economy.

The near-term adjustment process from any sharp price move in as basic a commodity as oil or gas can disturb producer entities and deteriorate their creditworthiness, however. There are two broad groupings of bank customers that are suffering currently, and the underlying creditor's risk is different to both .. producers and services companies.

The producing companies fall into two categories of risk ... majors and independents. The majors, for the most part fully-integrated companies in multiple businesses, are presumed sound under most pricing scenarios. The latter are more closely dependent on pricing and are financially weaker than most majors owing partly to their lack of diversification. Nonetheless, the offset to price is time. Most reserve-based lending should have been done at loan-to-asset value ratios of 1:2, meaning that banks finance significantly less than full expected values. Therefore, as long as the financial security of such clients is dependable, loan payouts are assured with some margin of error in price assumptions.

The specific approach is usually to take a discounted cash flow of future revenues projected from proven hydrocarbon reserves, allowing half that amount for the loan. Another approach is to lend only such as at payout enough reserve cash flow remains to service the loan a second time, the so-called half life formula. In either case, interest rates are clearly a factor as well. Hence, as oil prices fall accompanied by some interest rate decline, the effective loan-to-asset ratio can still remain close to 1:2 even though prices were $32/barrel in November and may average only $16 currently.

The pricing assumption bankers have been using recently is approximately $20-23/barrel oil and $2.10/2.20/MMCF gas, held flat for a period of years and ultimately rising perhaps 6% annually later in this decade. This pricing projection is obviously a lower one than was used just one year ago or certainly than that used in the late 1970's and early 1980's. Banks routinely "test" their reserve-based credit portfolios at lower pricing. That used to be $20-21/barrel but has now gone down to $15-17 on a sustained basis. Under the latter scenario, most banks claim outright credit losses (chargeoffs) will be only modestly higher than experienced so far, while the level on nonperforming loans will advance more substantially. The ultimate offset is time. While the debt's interest servicing can usually be sustained, the term of the loan may need to be extended to allow a larger revenue stream at constant volume but lower unit price to eventually repay the lendor. In many cases this does not even require nonperforming status. Constant volume may be questionable if pricing weakens severely, as a negative gross margin could develop.

It is important for the Committee to know that more reserve-based bank loans are natural gas rather than oil related. The average must be at least 60% gas or higher, and there may be differing factors ultimately determining natural gas pricing, although the general direction must ultimately be somewhat parallel.

I would also like to mention that the "test" case pricing a year ago was obviously a higher unit price than is being used today. A year ago, when questioned about a $20/barrel "worst" case, most lenders said the price level itself was less relevant than the speed with which the assumed price was realized. Simply put, in early 1985 most energy lenders were not unduly worried about $20/barrel per se, but were concerned that such a level might transpire in a few months rather than over a few years. Their rationale was that in the former case it would be much more difficult to redress collateral valuation securing the loans in an orderly fashion. Considering that over the last four months spot oil pricing has precipitously fallen (more than 50%), collateralization may currently be a problem, although a lower "test" case price assumption has quickly replaced the older $20/barrel assumption. I am unaware of any testing appreciably below $15/barrel. It is my understanding that natural gas price "tests" are paralleling oil at roughly 1:10, or perhaps $1.50/MMCF at worst. This BBL/MMCF ratio is based on delivered product "at the burner tip", implying about $1.25/MMCF transmission cost. This further implies that pipeline companies might also be candidates for loan portfolio problems.

The second and more amorphous category of energy-related risk is services. This includes contract drillers, equipment suppliers and general services providers. This group has already been far more problematic. Here, nonperforming status has been running perhaps 15% of the relevant total loan portfolio and higher, as a rough average, versus perhaps 5% and higher for the independent producer group. (Nonperforming loan ratios on total bank loan portfolios are averaging roughly 3% for the banking industry universe I follow most closely. Hence, 5% represents a significant level of deterioration.)
Net chargeoffs, relative to average loans, have also been at a much higher ratio for the service sector than for independent producers. Majors have provided no nonperformers or chargeoffs to my knowledge.

The distinguishing problem with the service sector is either a lack of collateral, as the term "services" might imply, or the sharp reduction in collateral value where it exists ... e.g. drilling rigs. (The rig market auction pricing has declined far more, in percentage terms, than the price of hydrocarbons.) The analytical problem with the service sector is its amorphous nature. The correlation to a specific $/barrel test assumption is hard to grasp and drilling activity is probably the closest but an imperfect proxy.

The bulk of 1985's earnings problems at banks concentrated in the energy sector were attributable to loan losses stemming from the services sector, in my opinion, and primarily to fringe quality credits. The troubled names, however, are becoming associated with larger companies ... e.g. the Chapter XI's of Global Marine and now Smith International. I expect the oil service sector to continue to provide the bulk of the outright bank credit losses, and any sector recovery is likely to lag any underlying energy price recovery by some time. It should be taken as a given that 1986 loan losses in this group will be as high as in 1985, probably higher, and very few credits ... if any ... are worry-free at a prevailing energy price of $15/barrel.

A third category of risk, independent refiners, may well have seen their worst. This is not simply because they benefit from the lowered raw material cost, but because 1985 saw significant chargeoffs to this group from the banking industry.

While the above is hopefully an inclusive narrative of the principal problems by group within domestic credit quality risks, further detailed analysis is not within my expertise, and is best left to energy stock specialists and energy industry professionals available to you on other panels.

**TWO TYPES OF ENERGY-RISK BANK PROFILES:** I would like to offer two hypothetical bank profiles related to petroleum sector risk. The first would be the medium to large, southwestern regional and the second would be the large, New York money-center. These two profiles are my best-estimate model for the average bank from both markets, and is not a disguised model of any specific name. There are certainly other profiles to consider, particularly when examining smaller (under $1-5 billion) banks that may be more vulnerable to energy risk. In the case of larger regionals there may be greater extremes of risk than below. However, these two examples are hopefully instructive in providing a rough mathematical model for assessing relative risk impact. They indicate that an energy-emphasis regional bank can more readily succumb to incremental corporate loan chargeoffs:

## SOUTHWESTERN REGIONAL

| | | % Loans | Non-Performing Ratio | Non-Performing Loans | Chargeoff Ratio | Net Chargeoffs |
|---|---|---|---|---|---|---|
| Loans-Energy Related | | | | | | |
| major producers | 35% | 7% | 0% | 0.0% | 0.00% | 0.00% |
| independent producers | 35 | 7 | 8 | 0.6 | 4.50 | 0.31 |
| service/supply/drillers | 30 | 6 | 20 | 1.2 | 10.00 | 0.60 |
| | 100% | 20% | | 2.8% | | 0.91% |
| Loans-Non Energy | | 80% | 3% | 2.4 | 0.50% | 0.40 |
| | | | | 5.2% | | 1.51% |
| Total Loans | | 100% | | | | |
| Other Assets | | 35 | | | | |
| Total Assets | | 135% | | | | |

The southwestern example suggests 60% of net chargeoffs and 50% of nonperformers are energy-related while energy reflects only 13% of the loan portfolio, 6% being in the more vulnerable service/supply/drilling category. Obviously we cannot readily connect secondary effects in loan quality (e.g. peripheral suppliers or real estate) in this simple model.

## NEW YORK MONEY CENTER

| | | % Loans | Non-Performing Ratio | Non-Performing Loans | Chargeoff Ratio | Net Chargeoffs |
|---|---|---|---|---|---|---|
| Loans-Energy Related | | | | | | |
| major producers | 70% | 5.6% | 0% | 0.0% | 0.00% | 0.00% |
| independent producers | 20 | 1.6 | 8 | 0.1 | 4.50 | 0.07 |
| service/supply/drillers | 10 | 0.8 | 20 | 0.2 | 10.00 | 0.08 |
| | 100% | 8.0% | | 0.3% | | 0.15% |
| Loans-Non Energy | | 92% | 3 | 2.8% | 0.50 | 0.46 |
| | | | | 3.1% | | 0.61% |
| Total Loans | | 100% | | | | |
| Other Assets | | 35 | | | | |
| Total Assets | | 135 | | | | |

Holding nonperforming and chargeoff ratios constant, owing to a preponderance of risk among major producers and the smaller concentration of energy per se, only 25% of net chargeoffs and 10% of nonperforming may be energy-related in a large money-center.

Taking the above to a hypothetical conclusion, assume the regional is running at a sub-par ROA of 30 basis points (0.30% on assets and roughly akin to fourth quarter 1985 results) from the already-high chargeoff ratio of 151 basis points, whereas the money-center is doing "better" at 65 basis points ROA. Should incremental chargeoffs double the service/supply/drilling sector to 20% and rise half again as much to 6-7% in the independent producer sector, the southwestern regional will slip to barely breakeven whereas the money-center will lose only about 11% of its ROA.

The above modeling and assumptions serve only to illustrate the inherently greater risk of energy-concentrated regionals to domestic credit risk. The presumption is that such banks can have as much as 75% of their primary capital in equivalent service/supply/drilling loans, whereas a multinational money-center might have only 10% relative service sector exposure to primary capital.

While a Herculean assumption, perhaps it is reasonable to assume a doubling of losses from this sector should energy pricing remain at $15/barrel on a sustained basis. My point is the negative leverage is potentially dramatic, even from a small, 6% of the portfolio, if that 6% is in service companies. I want to make clear to the Committee, however, that my nonperforming and chargeoff ratio base assumptions are highly conjectural. Additionally, direct energy-related risks can be found in some concentrations outside the Southwest, definitely including the Western banks and to varying degrees in other regions.

**COUNTRY RISK:** The discussion above casts the multinational money center at modest risk to the current petroleum market's weakness. Un-mentioned, of course, is their more substantial involvement with developing and non-OECD countries. Considering the stock market's assessment of plummetting oil prices over the last two months, it is clear that the initial news of the downslide reduced multinational bank stock prices more readily than most energy-emphasis regionals. This may have been partly a simplistic reaction to the money-center bank's high absolute dollar exposure ... certainly in the $ billions ... to total corporate energy lending, before examining the smaller proportional portfolio weightings and the smaller concentrations in services companies. More likely it was their association with troubled oil-related LDC's, particularly Mexico.

Here we can become embroiled in the broader issues of bank debt and developing countries. I am of the camp that segregates each country's specifics rather than aggegating them all in risk analysis. Further, I view most of the larger debtor nations as having successfully navigated short-term restructurings and attendant policy adjustments related to their current accounts and hard currency requirements. That largely accomplished, I am a strong supporter of the so-called Baker Initiative and its probable success in promoting both longer-term development and a weaning away from over reliance on bank debt in lieu of other sources of new funds for most LDC's. Further, it should be obvious that much of their historical current account crisis stemmed from the second, broad upturn in energy prices begun in 1979. Reversal of that trend should therefore be considered a fundamental positive. More developing countries are beneficiaries of lower petroleum prices than sufferers. Moreover, virtually all are beneficiaries of lower interest rates and a stronger industrial-world GDP outlook, both logical results of lower oil prices. Nevertheless, certain oil-exporting countries should be examined, primarily Mexico.

Mexico's current account was clearly deteriorated by a lower unit price for its primary export. Yet the current account weakness is much more severe than a simple model of oil price impact would suggest and Mexico's recent public proclamations include demands for substantial ($6 billion) new money and interest rate relief. Some interpret rate relief to include bank lending spread concessions ... probably a mutually exclusive demand in the company of an incremental new debt request. Lower spreads over LIBOR (a wholesale bank funding cost benchmark) have been awarded improving-creditworthiness borrowers, including Mexico last August. But the rate relief now being sought is frequently interpreted to include potentially negative or sub-LIBOR spreads. If granted to Mexico, a precedent might be set for other country borrowers to aspire to, even those that are net beneficiaries of lower oil prices.

The impact to multinational bank earnings varies according to the concession rate itself and to its pervasiveness among debtors. The larger multinationals may have as much as 15-20% of their loans to countries that have recently been refinanced for extended maturities. A 2% or 3% bank interest yield reduction taken on all such countries is a reasonable worst case. It would certainly involve sub-LIBOR spreads. The earnings impact varies from 5% to perhaps 25% of their net annual income, depending on relative exposure to cross-border (hard currency) debt and innate profitability itself. This would be a difficult but by no means catastrophic situation, although new private sector borrowing capacity would likely evaporate for LDC borrowers, even to include necessary and short-term, self-liquidating trade finance ... placing a much higher burden than ever envisioned on industrial country governments and "official" lenders such as the IMF and the World Bank.

Rather than assume an aggregate contamination of LDC finances, however, it is useful to examine the case of Mexico more closely. As mentioned, the degree of current account impairment seems to belie the fundamentals. A well-accepted rule-of-thumb is that every $1/barrel in oil price, at constant export production volume, carries approximately $500 million in annual export revenues for the trade balance, whereas every 1% point change in interest costs on Mexico's debt entails about $800-900 million in current account debt service. Clearly, interest rates have declined over the same period as energy prices have declined. Very crudely, LIBOR and energy spreads have fallen in the last year in total by nearly 5%, suggesting that oil could fall $10/barrel, or from $26 a year ago to $16 currently, without any net impact to Mexico's current account. Yet

Mexico mounted a serious cry of crisis long before oil prices were approaching $16/barrel. Why?

Part of the answer is in reduced oil production volume in the face of declining oil prices, which occured last summer. Yet export volume resumed afterward and the current account recovered substantially. A similar curtailment of volume is present again, implying that stability in pricing may be more important than absolute price in returning oil export revenues for Mexico at a healthier level.

More of the discrepancy, however, can be found in capital flight, in my opinion. It is capital flight that disturbs the banking community more than energy price weakness, and capital flight has been responsible for $ billions of shortfall in Mexico's current account, perhaps more than $10 billion cumulatively from 1983 through 1985. Remedies such as a lower Peso exchange rate and higher internal interest rates would remove what is essentially a Mexican government subsidy to capital flight. Since much of the flight is to the U.S., perhaps even a tax treaty would be as relevant as an oil import tarriff with Mexico under its "umbrella". (Expatriated Mexican capital is essentially subsidized further by the attraction of tax-free interest, unreported to the Mexican tax authorities.) This suggests that Mexico has other alternatives to explore in bargaining with the international financial community, and that Mexico is not merely at the sole mercy of the energy price war.

Not wishing to stray too far afield from this Committee's interests, I would conclude that Mexico's current plight is fundamentally less contingent on the world energy market than is popularly believed. Facts and figures defending this point of view could become irrelevant to the psychology of desperation, however, if oil prices continue to plummet or remain weak for a protracted period of time, as the controllability of capital flight itself may become intractible in this scenario ... the true but indirect result of energy pricing. The threat to the U.S. banks would still be the same. One observation worth repeating for those of you that might be uncertain about the distribution of Mexican bank debt: This is not a predominantly U.S. banking system problem. Approximately 64% of the crossborder bank debt to Mexico is held by non-U.S. banks. I believe Japanese banks figure heavily in this base.

Producer countries other than Mexico might also be addressed. Venezuela is the fourth largest borrower in Latin America and is the second largest debtor among oil producers at $32 billion. Bank debt is $25 billion, of which 42%, or $11 billion, is to U.S. banks. (This compares to a $26 billion U.S. bank debt share to Mexico.) Venezuela recently signed a bank restructuring agreement that took several years to complete. For the Committee's information, there is a contingency clause in the agreement that re-opens discussions based on the price of oil. However, Venezuela has grown rich in the last decade, and currently has $12 billion in foreign exchange reserves, $8 billion in cash, which affords substantial cover. The principal threat from Venezuela is Mexico. If Mexico were to receive a debt restructuring entailing some mechanism providing significant debt service concession, but tied in some manner to oil, then while the precedent might not affect all other LDC's, it could affect other net exporters.

Nigeria is frequently mentioned as a problem, but U.S. bank debt is only $1.5 billion. U.K. banks have $2.4 billion. Indonesia is $3.4 billion for U.S. banks. It is reasonable to assume that most other oil producing countries pale in significance to Mexico. Other OPEC members owe $8 billion to U.S. banks in total (Algeria, Ecuador, Gabon, Iran, Iraq, Kuwait, Libya, Qatar, Saudi Arabia and the U.A.E.), according to an April 1985 release by the Federal Financial Institution's Examination Council. Saudi Arabia, at $2 billion, is the largest. Mideast debtors have long since reversed their role from "liquidity providors" to net debtors. I have very little background to offer on the nature of this group, other than to suggest some further analysis might be helpful. In sum, Mexico and OPEC countries' total U.S. bank debt is in the $50 billion vicinity, about 15% of our banks' total foreign loan exposure, and perhaps 6% of their total loan portfolio.

Since lower interest rates apply to these countries as well, there is clearly an offsetting benefit. Moreover, lower interest rates and lower energy costs are a strong net positive to oil importers among the remaining developing world. Both produce a direct benefit to their current accounts, which is their bottom line, so-to-speak, in regard to debt service. I would like to point out that most of the large developing nations are not over-laden with debt, but are rather over-laden with "hard" currency debt. In the case of Brazil, for example, net debt is equivalent to 48% of its GDP, above the ratios of France and West Germany, but well below Britain, Denmark, Italy and Belgium. The true problem is that 60% of it is foreign debt requiring foreign exchange for servicing.

Additionally, lower oil and interest costs are considered a strong net stimulant to the OECD countries that, in turn, can be looked to for greater export demand in the developing world. We thus see a definitive net plus to the developing world's aggregate current account balance, affording further overall improvement in their financial condition. Moreover, substantial progress has already been achieved. The cumulative current account balances of the eight major Latin American debtors, excluding Mexico and Venezuela, advanced from a $75 billion 1980-82 deficit to an $18 billion 1983-85 deficit. Including Mexico and Venezuela, the swing was from a $96 billion deficit to a $5 billion deficit. It should also be recognized that import reductions, much of which represents indogenous control, was more dramatic than export recovery, a trend more tied to external factors. It should finally be noted that bank debt has not advanced appreciably, in aggregate, for Latin America since 1982 and that U.S. banks' Latin

American debt relative to their primary capital has been declining for three years and is presently close to the 1977 ratio. We can conclude from the above, perhaps surprisingly to you, that U.S. banks are not lending to pay their own interest in Latin America ... at least in an aggregate sense ... althought for specific countries (certainly Mexico) in the short-term that may not be the case.

My purpose in belaboring the general LDC debt situation is to call the Committee's attention to differences among countries that might ultimately limit the risk of restructuring contamination should the Mexican case unravel further. My point would be that most developing nations have more to gain than lose in a lower oil price environment, and are now recognizing that fact. They have also suffered policies to improve their liquidity and creditworthiness. Thus they may be more willing to be segmentated from their oil producing brethren to retain their ground. To an unanalyzable extent this works as a natural restraint against their tendency to cooperate together, e.g. Cartagena, in presenting demands on bank lenders.

Parenthetically I should mention that implementations of the Baker Initiative will or could be delayed pending a near-term restructuring for Mexico. While Mexico has slipped farther away from eligibility for a long-term, developmental solution to its needs, one is still necessary. Some of the Baker elements, e.g. privatization and interest and exchange rate "de" controls, will logically be a part of this restructuring. I personally believe Mexico's dire straits are currently being amplified for bargaining purposes.

Finally, anticipating your questions, I should return to the worst case parameters related to multinational banks in the event of increasing interest rates, whether for Mexico or a broader array of countries, and suggest that the threat of additional damage by way of forced loan portfolio markdowns may be unlikely or difficult to cause. Apart from the interest rate penalty in such a scenario, some analysts argue that the underlying loans will or should be marked down as well, further penetrating capital ratios. I believe this is unnecessary and probably unwieldly. Should the accountants demand a special balance sheet charge reflecting lower interest yields, the banks would rightly counter that all their loan portfolio be eligible for a mark-to-market reflecting prevailing market interest rates. While a hit would be sustained on sub-LIBOR country credits, it would be offset by markups on other loan assets yielding above-the-current-market yields or such portions of their portfolios as older single-family mortgages.

**CONCLUSION:** I believe banking industry damage from the current petroleum market price war can be minimal depending on the final, stable level in pricing, becoming less sanguine however at prices below $20/barrel. I realize that many observers would argue for $15/barrel or worse. Second, I reiterate that the final or trend price is less relevant than the time elapse to reach that price. Third, stability of price may also be more relevant than absolute level in re-establishing higher unit volume for oil exporting countries. Fourth, this may also be the more critical factor encouraging the solidification of energy industry spending plans, which will then clarify the extent of bankruptcy and loan losses in bank's service/supply/drilling portfolio exposure. Fifth, and finally, I cannot accurately predict the potential for bank failures or periods of distressed bank funding that might accelerate them. My judgement is that selected but hopefully limited failures are already at threshold.

Senator **Nickles**. Thank you, Mr. Albertson. We appreciate your comments.

Mr. Treat.

### STATEMENT OF JOHN ELTING TREAT, EXECUTIVE PUBLISHER, PETROLEUM INTELLIGENCE WEEKLY

Mr. **Treat**. I thank you, Senator Nickles.

Many of the points that I wanted to make are in my written statement which I would ask be included in the record, and I will confine myself to some very brief oral comments, particularly brief because I agree so thoroughly with much of what has been said before.

Let me just, therefore, concentrate on a few points. First of all, where we are going. There are quite literally an infinite variety of scenarios that one could construct about the likely course of oil prices over the next 5 years. Every time I sit down to do it, I add one more to the list and I finally decided not to burden you all, even in my written testimony, with all the crazy ideas that one can come up with.

Unfortunately, they are credible, too. I think, though, that one needs to examine just for the sake of understanding the situation the possibility that prices will continue to collapse, and I would say that in the short term there is a very real possibility that that will happen. And whereas, 3 months ago I do not think you could have gotten a single person to step up to this table and say that the price of oil could go to $5 a barrel, if production levels continue at the levels that we have seen them in the last few months, there is no doubt in my mind that the possibility of the oil price falling that far is very real.

And that means that gasoline prices of less than 50 cents a gallon would once again be possible.

However, that is a very unstable situation. It would not last. And as a result, one can anticipate that there would be a recovery from those very low levels quite rapidly, certainly within, say, 2 years. However, the pain that would be inflicted during that period of time I am sure would be considerable.

Senator **Nickles**. Mr. Treat, if I might interrupt. Mr. Chairman, I have an amendment, or someone else is trying to amend a separate section of the reconciliation package that I am involved with.

So I apologize to the witnesses. I will be reading your statements. There is some outstanding information that you all put together and I hope to be back very shortly. Thank you.

The **Chairman** [presiding]. Thank you.

Mr. Treat, you may proceed.

Mr. **Treat**. My judgment that the price would fall this far is based on very simple calculus; that is, that the overproduction is on the order of 2 to 3 million barrels a day and in the short run, if production continues at current levels, prices would have to go down to $5 to really choke off sufficient supply to bring the market back into balance.

We have seen that the issue of production costs has been a bit of a moving target. The closer you get to it, people reassess what their breakeven is and discover well, maybe they could produce at $1 less or $2 less. We have seen you do not need to look any further than the refining sector or the tanker business over the last decade. There have been lots of situations where on paper you would think that the tankers would have been scrapped or that the refineries would have been scrapped, but they kept operating sometimes for several years.

So I anticipate that the lower range of possible scenarios is that the price would go that low. However, it would come back; the price would come back very quickly; certainly before the end of the decade.

Conversely, it is equally plausible that the price could recover very quickly. Actions by the Saudis and some of the other members of OPEC could clearly restore the price to at least $20 a barrel, literally in a matter of a few days. This gets into the issue that particularly Mr. Schuler mentioned, which is to assess the intentions of the Saudis who I do not think should be unilaterally blamed for the current situation, but obviously their single action is the most important contributing cause of the current situation.

I agree entirely with Mr. Schuler and I do disagree with Dr. Schlesinger a bit on this point. I do not think the Saudis—I think it is a smokescreen to say that the Saudis are trying to bring the British to the table. What they are really trying to do is teach a number of oil producers a lesson, but it would be very politically difficult for them to identify those countries. It is much easier for them to say we are after Maggie Thatcher.

But in reality, what they are trying to do is get some burden sharing, get OPEC to function much more as a cartel than it has been able to. However, my own experience watching them for the last 15 years leads me to believe that if they try to put prices back up quickly, significantly over $20, we will once again see a cycle of erosion like we have seen over the last few years; that they will not be able to hold that ground significantly over $20.

So I am left from that analysis with the conclusion that prices will fall within the range of $10 to $20. I fear within that range there may be a lot of fluctuation. We may just have to live for a period of 5 years, maybe longer, with a price which oscillates sometime in the lower end of that range; sometime in the higher end of that range.

Beware of anybody who comes before this committee or the American public and says he knows exactly where they are going to be. And be particularly beware that if a bunch of forecasters come and they all agree, then you know you are in real trouble because when forecasters agree, discontinuity is sure to follow.

Now, the second point I would make is what are the implications for a policymaker. I have to here emphasize I am speaking as a U.S. citizen. This is not the editorial policy, obviously, of my publication but just some observations I would make from a few years experience myself on the policymaking side.

As Jim Schlesinger said, there is a tendency in U.S. public policymaking to swing from complacency to panic. I think that swing should be resisted. We should not overreact. I think we can afford to take the time to let the situation clarify a bit.

I recall very sound advice given to the Congress in 1973 by Professor Edelman, who said, "Don't just do something; stand there, at least for a while."

However, if we are confronting a situation where prices remain low, where we are choking off the exploration and production expenditures not just for 1 year, but it looks like this is going to continue, I think that some action by the U.S. Government is advisable.

But the first thing is to recognize we are in much better position today than we were in the early 1970's when we were confronted with difficult choices. First of all, we have got the Strategic Petroleum Reserve. We have got a lot of oil in it. Indeed, if prices stay low, it might be wise to think of adding a little bit more oil. I understand that we could add at least another 100 million barrels or so without building any new facilities. It seems to me that would be a very prudent thing to do when the price of oil is lower.

Second, I think we should free up any unnecessary restraints on our energy industry to enable it to better cope with the kind of fluctuations that I think will occur. And this goes to the issue of deregulation, particularly of the natural gas industry and particularly of the transportation sector in that industry where I believe there still are significant constraints which may inhibit the ability of natural gas to move in and substitute for imported oil that might otherwise come in.

I think some of the other provisions, suggestions that have been put on the table here this morning also bear study. Tax incentives for domestic production certainly is worth a close look. Some of the sort of nonmarket restrictions and programs that were enacted in the 1970's may still be appropriate to the current situation.

I think the fuel use efficiency standards in the automobile industry and repealing some of the restrictions on the natural gas use and the electric utility sector certainly bear close scrutiny.

I will also offer one comment on the oil import fee. It has a lot of attraction on first blush and maybe even on second blush, maybe even on third. But the problem is, from at least my experience in Washington, is we are highly unlikely to get a clean import fee bill.

The minute you open up that Pandora's box and you start making exemptions, and there would clearly be, I think, a very strong case for exempting Mexico, and then if we exempted Mexico, well how on earth could we face Canadians, and if we did that then how could we face the Venezuelans, and then what do we tell the British and the Norwegians. I think the situation would rapidly get out of hand and therefore, I think, on very practical grounds, it ought to be ruled out even if you accept some of the arguments in favor of it on sort of pure economic grounds.

Well, I think it is impossible, as I said, to predict a precise price path. I would urge the Government in looking at the situation to wait, to study it carefully, and to recognize that a certain amount of the pressure for action comes from the discomfort of learning to live with an uncertain situation. But fundamentally, that is what free markets are about and I think fundamentally that is what we have got to learn to live with.

Thank you.

[The prepared statement of Mr. Treat follows:]

# INTERNATIONAL OIL MARKET PERSPECTIVE

Statement before the Senate Committee
on Energy and Natural Resources

March 14, 1986

John Elting Treat
Executive Publisher
Petroleum Intelligence Weekly

For the past three months, the world has been the somewhat reluctant recipient of an elementary lesson in basic economics as overproduction of oil drove prices down from around $ 30 per barrel to about $ 12 per barrel. The proximate cause of this overproduction was the decision by Saudi Arabia, taken last summer and implemented in September, to double its production from roughly 2 million b/d to over 4 million b/d. But to focus only on this act is to miss the more important point. The Saudis acted in exasperation, after seeing their share of the market steadily eroded by a relentless tide of oil flowing from new, non-OPEC sources, as well as from their OPEC allies.

There is some evidence that the Saudis expected their action to have a significant impact on prices. But no one seems to have anticipated the speed and depth of the price collapse which has occurred. The price plunge gave dramatic testimony to the lack of demand response to price changes in the short run. No matter how low prices go, consumers do not quickly adjust their consumption habits. Do you plan to drive more or turn up your thermostat just because the price of gasoline or heating oil went down yesterday ? So if at the margin, there is extra oil looking for a buyer, prices will have to fall very far indeed to find a new equilibrium.

How far could they fail ? In the short run, far enough to choke off enough production to meet demand. Since we are now in the slackest season on the oil year, that might mean prices could go as low as $ 5 per barrel, implying gasoline prices of well under 50 cents at the pump within a very few months. Prices of certain grades of heavy crude oil have in fact approached this level, although the more desirable grades are still in the $10-14 range. It would take a price that low to force enough production to be shut in to make room for the increased production by Saudi Arabia and the rest of OPEC.

But does this mean that prices will go that low in the next few months? And how long will they stay there? These are not easy questions to answer. There are quite literally dozens of entirely plausible scenarios which could ( and no doubt will ) be constructed. Yet there is no scientific way to predict the actual path of prices. We must be prepared to deal with a wide range of possibilities, and pursue policies which will enhance, not inhibit, the ability of the world economy to adjust quickly and efficiently. We should never lose sight of the policy errors of the 1970s, which clearly exacerbated the adjustment process, delaying and intensifying the pressures caused by the price increases of that decade.

While I cannot offer you a roadmap of future oil market developments, I can briefly discuss two possible scenarios which are worth considering:

1) Rapid Collapse, Slow Recovery; and
2) Rapid Recovery, Slow Collapse.

## Rapid Collapse, Slow Recovery

If the Saudis and all the other producers in the world continue to produce at current levels ( 59 million b/d), supply will exceed demand by roughly 3 million barrels/day for the next three months. Unless production is reduced by approximately this amount, prices will continue to fall ( albeit sporatically ), until production is cut and/or demand grows to create a new equilibrium. There will be some seasonal recovery of demand, caused by the need to build stocks for next winter, and eventually by higher economic growth, but most of the adjustment will have to come from supply cuts. I suspect that most observers are overestimating the price at which these cuts will take place. We have seen ample evidence both in and outside the oil industry that companies are reluctant to shut down losing operations. Just look at how long tankers and refineries kept operating over the past few years while they were ostensibly losing money. A number of observers have recently suggested that a price of $ 10 would reduce production by 1 million b/d by the end of the year. My suspicion is that it would take a price of $ 5 or even a bit lower to wring out the 2-3 million b/d necessary to balance the market and send prices back up.

This is however, and it must be emphasized, a very short term - and some would add, short-sighted - perspective. Prices of $10 or less would not offer any prospect of longer term equilibrium. If prices remained at or below $10, demand would surely respond, given a year or more, both through the direct stimulus to oil consumption, and the indirect effects of higher economic growth. Low prices would also destroy exploration and development budgets, sowing the seeds of a rapid price recovery towards the end of this decade, or the beginning of the next. The longer and lower prices remain depressed, the more vigorous will be the inevitable recovery of prices in the future. But here is a low probability of a return to the extremely high prices of the early 1980s. The broadened base of oil production and the ample availability of natural gas and coal make a price recovery to the $ 20 range far more likely than a return to the $30 range.

## Rapid Recovery, Slow Collapse

There are of course alternative scenarios which would see prices rebounding to the $20 level very quickly. These involve substantial cuts in production by oil exporters to balance the market. I believe Saudi Arabia will not willingly lead the way on such action. Rather the Saudis will act if and when a significant number of OPEC and some non-OPEC producers make a credible commitment to production cuts. The Saudis will be justifiably skeptical of lofty rhetoric. They have heard it all before - the pledges of restraint which were inevitably followed by price cheating and quota busting. They will therefore probably demand proof of lower production by others before they agree to join in any collective effort. It is always possible, however, that external pressure from their warring neighbors could force them to act unilaterally, without insisting on collective cuts.

But the risk in this case, would be that to restore prices to their former levels ( i e. above $ 25/barrel), would almost certainly lead to a subsequent erosion of prices in the ensuing months as discipline faded and economic pressures mounted.

Unfortunately, there is very little that the U.S. government or consumers generally can do to influence the course of these events. This may be an unpopular view in this city, but the oil price path of the new few months will be decided by the oil producers, including the Saudis. If they cut back production to approximate current demand, prices will firm up. If overproduction continues, prices will fall.

If any of us has learned anything from the past decade, it should be to maintain a healthy disrespect for the art of forecasting. In fact, if one looks back to the past autumn, one should be especially skeptical of situations when there is a consensus of forecasters. When forecasters agree, discontinuity follows.

It is tempting to believe that we might plot a more rational course for the next few years, but I don't think it will be within our grasp. Just as our political and economic institutions have failed to stabilize currency rates, and other commodity prices (sugar,rubber,tin etc.), so they wil prove

incapable of imposing stability on oil prices. We would do well to heed the 1973 advice of Professor Adelman,( recently resurrected by Arlon Tussing) - " don't just do something - stand there ! "

In reality, there are some modest actions which the Congress might consider, but none of them have the porkbarrel appeal of the massive energy programs of the 1970s. We should use the period of lower prices to add more oil to the SPR, and to complete the process of deregulation of natural gas prices and energy transportation. These actions would promote efficiency and make our economy more able to cope with the likely volatility of oil prices over the next decade.

To put all of this in an historical perspective, we should recognize that oil, like other commodities, will experience substantial price fluctuations. After decade upon decade of managed markets and administered prices, there is no longer any single group or organization which has sufficient will or capability to unilaterally determine price and production. We can sit around a table and assure ourselves that " they won't let this happen." But as Joe Roeber recently wrote " there is no'They'. No coalition of banks, companies and governments to be forged together by the common misfortune of falling prices. There is only OPEC, and there is no evidence yet that they have the will to act together. "

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When historians look back on this century, they may well marvel not on how oil fell from grace in the 1980s, but rather on the fact that it took so long to happen.

The **CHAIRMAN**. Thank you very much, Mr. Treat.

Mr. Kinney, and I will say to all witnesses, their prepared statements will appear in the record.

## STATEMENT OF GENE T. KINNEY, EDITOR, OIL & GAS JOURNAL

Mr. **KINNEY**. Thank you, Mr. Chairman. I will summarize my statement as briefly as I can.

I must say that, like Mr. Treat I agree with most of what has been said with the exception of a couple of things that Mr. Schlesinger said, and I will point those out as I go along.

The collapse prices has set in motion a powerful chain of responses. Together, they will reduce non-OPEC supply, increase total world demand, and restore OPEC to the driver's seat by the end of this decade, if not before.

The Saudis' decision to raise production and lower prices now placed OPEC in a position to raise production and prices later in the decade. The initiative is entirely in keeping with past Saudi actions and long-range objectives. This is not the first time Saudi Arabia has led oil prices downward.

In the first instance, the casualty, indeed the target was alternate fuel investments in the United States and you know how successful that was. In addition to other exporters, first of all, OPEC, the current campaign is directed against high-cost convention oil and gas production in non-OPEC countries, particularly the United States, which is the primary unidentified target of the present Saudi initiative. The strategy is already working.

Capital is in full flight from U.S. oil and gas exploration and this fight is decimating our future exploration capability as well as the economies of producing States.

This week, as you have heard earlier and as you said in your opening statement, active rigs fell to about 1,200 which is 73 percent below the drilling peak at the end of 1981 and the lowest since July 30, 1973. And so it is more than coincidence that the current spot market crude price in real terms has fallen below pre-embargo 1973 levels. At that time, new West Texas intermediate crude sold for $5.56 a barrel which translates to $13.16 in 1986 dollars.

Markets are still as unstable at present levels as they were at $34, $29, and $28 a barrel, as Mr. Treat has said. The reason is that the precipitous decline in price has done little to balance supply and demand, but it will. With spot price now below $15, thousands of wells have already been shut in.

This is the inevitable result when revenues from production no longer exceed variable costs. Other thousands will be shut in as that line is crossed. If prices stabilize at around $15, the drilling rate should level off at about 1,150 active rigs on an annual basis.

The resulting lower production and increased demand would boost imports by 4 million barrels per day by 1990. That would mean a foreign oil requirement approaching 9 million barrels a day, almost 52 percent of domestic oil demand, a dependency level not expected under the 1985 price outlook for another decade.

And what, if anything, should be done about this? What we need, I believe, is not a new energy policy, but rather a systematic energy checkup, a fresh look at existing policies to see whether the old premises still apply, if indeed they ever did, in order to try to make the myriad actions of the Federal Government at least consistent with the general direction in which a rational energy policy should move.

Each major Federal action should be subjected to a simple energy impact test. Does it encourage production and conservation of domestic energy in a manner that is economically and environmentally sound? If it cannot meet that positive test, as many policies do not, the action should at least do no harm.

It seems to me a reasonable approach for a nation that is still the largest producer, consumer, and importer of energy in the free world.

The following checklist is worth attention.

### ON NATURAL GAS

Current policy was based on the concept of a noncompetitive industry serving a captive market from an almost depleted resource base. Current reality is a surplus whose benefits are denied the Nation by laws restricting the use of gas while the price is pulled downward by competitive fuels and the most heated gas-on-gas competition in history.

The laws regulating prices and markets should be changed to reflect the real world, and this is the point on which I most vigorously disagree with Mr. Schlesinger.

### ON THE ENVIRONMENT

Current and prospective energy conditions, while serious, do not justify a halt in environmental progress. Nevertheless, conflicting laws and regulations should be reconciled so that energy development, where permitted and sometimes even mandated by law, is allowed to proceed.

### ON TAXES

It is worth noting that tax treatment of oil and gas production is less favorable now than it was before the Arab embargo. Current levels of drilling reflect investors' negative expectations in current tax legislation, as well as lower prices and gas markets.

The drilling recovery that began in 1984 ended abruptly, the very month I might say, with the publication of Treasury I, which very forthrightly set out to drive capital from oil and gas development, and this seems inconsistent with national energy goals.

In other free world countries, when oil economics get markedly worse, governments almost always make fiscal terms better.

### ON TRADE POLICY

The United States does not need import fees that would raise the cost of energy unnecessarily or export controls that impede the development of petroleum resources. I might say my view on the import fee is colored by the judgment that it would be impossible that it would get a clean bill to the Congress, one that would not be so torn with exemptions that there would be no bottom line benefit to the initial target of the benefit; namely, the domestic industry.

The fairness of international trade is an appropriate issue to pursue, but pure protectionism is out of order, except for compelling national security reasons.

In summary, Mr. Chairman, you can lead private capital quite easily in any direction you desire. If you want less domestic energy, you should raise taxes and continue other restrictions on prices, markets, and production. If you do not want less domestic energy, then you should do the opposite.

Mr. Chairman, this concludes my summary statement.

Thank you very much.

[The prepared statement of Mr. Kinney follows:]

# Prepared Testimony of
Gene T. Kinney
on
# The Domestic and International Policy Implications of Low Oil Prices

Before the
United States Senate Committee on
Energy and Natural Resources

Washington, D.C.
March 14, 1986

The steep decline in the price of oil has major implications for the domestic and international policies of the United States.

The collapse in prices has set in motion a chain of responses that will reduce non-OPEC supply, increase total world demand, and restore OPEC to the driver's seat by the end of this decade if not before. Many observers have already written OPEC's obituary. Yet the leader of that cartel—Saudi Arabia—is in fact more firmly in control of international petroleum markets today than at any time in recent years.

The OPEC price-defense system may have fallen apart. But the dominant exporter has again seized production and price initiative. And, by all accounts, the Saudi's decision to raise production and lower prices now will place OPEC in a position to raise production AND prices later in the decade.

The Saudi initiative is entirely in keeping with past actions and long-range objectives. This is not the first time Saudi Arabia has led oil prices downward. The first instance was in 1983, when the casualty—indeed, the target—was alternate fuels investments in the U.S. and elsewhere, as the price fell from $34 to $29 under the weight of past Saudi overproduction. The casualty of the current campaign is high-cost oil (and gas) production in non-OPEC countries, particularly the United States, which is the primary unidentified target of the current Saudi offensive.

The objective in both cases was preservation of markets for the exporter with the largest reserves in the world. It had no choice but to act. Had Saudi Arabia continued in its role of swing producer within OPEC, its market would have disappeared within 2 years. Thus, the Saudi move to recapture market share, if not its price consequences, is one of those economic cataclysms that should not have been so surprising.

All the public Saudi attention has been directed at other exporters, including members of OPEC. Their cooperation is essential for any short-term gains by Saudi Arabia. But the present low-price policy will yield other, enormously larger market dividends. The strategy is already working.

Capital is in full flight from U.S. oil and gas exploration.

This week, active rigs fell to 1,212. That's 73% below the drilling peak at the end of 1981 and the lowest since July 30, 1973. Historically, drilling moves in lockstep with the real price of crude oil, which is an indirect measure of rate of return. So it is more than coincidence that the current spot market price in real terms has fallen below pre-embargo 1973 levels. Then new West Texas intermediate crude sold for $5.56/barrel, which translates to $13.16 in 1986 dollars. Early this week, spot and contract prices were about $1/barrel on either side of 1973 levels.

Last year, conventional wisdom held that prices probably would not fall below $20, and certainly not below $15. Yet markets are still as unstable at present levels as they were at $34, $29, and $28/barrel, the last three official prices for the OPEC (Saudi) marker crude. The reason is that the precipitous decline has done little to balance supply and demand. But it will. And the beginnings are already in sight.

With spot prices now below $15/barrel, thousands of wells have already been shut in. This is the inevitable result when revenues from production no longer exceed variable costs. Other thousands will be shut in as that line is crossed. It will come typically when the operator faces a maintenance expenditure that cannot be justified at present or expected prices.

If prices were to stabilize at around $15/barrel—that is, if Saudi Arabia were to decide that prices had fallen far enough to achieve its purposes—the drilling rate should average 1,150 active rigs for the year.

These developments, combined with the normal 10% annual decline rate of existing wells, would reduce production by just over 1 million barrels per day at the end of a year. By 1990, at this same price level, production would have dropped by 2.4 million barrels per day, raising import requirements by that amount.

Demand, meanwhile, will grow more rapidly than it would have at the higher prices previously expected. At a modest 2% annual growth rate that is reasonable under $15 oil, demand will rise 1.6 million barrels per day between now and 1990.

These two factors—reduced supply and increased demand—will boost imports in 1990 to 8,952,000 barrels per day, almost 52% of domestic oil demand. That's a dependency level not expected under the 1985 price outlook for another decade.

This scenario is the new base case for some economists. I expect a somewhat higher price. But you know how much oil price and demand forecasts are worth. Consultants still make forecasts, of course, but at least one that I'm aware of no longer charges for them on grounds they are worthless.

This uncertainty, however, should not distract us from the central point. Viewed from our present perspective of sharply reduced oil prices, the U.S. faces steadily rising oil imports under almost any plausible scenario.

What then are the policy implications? What if anything should be done about it?

It is time to make a sweeping review of the U.S. energy posture in light of the radically changed circumstances.

The idea is not to fit each form of energy into a precise, predetermined mold, but rather to let each make its optimum contribution. What we need is an energy checkup, a fresh look at existing policies to see whether the old premises still apply, if indeed they ever did, and to make the myriad actions of the federal government at least consistent with the general direction in which a rational energy policy should move.

Each major federal action should be subjected to an energy impact test, in the manner of environmental and revenue impact analyses that are routinely conducted: Does it encourage production and conservation of domestic energy in a manner that is economically and environmentally sound while maintaining access to needed foreign sources on reasonable terms?

If it does not meet that positive test, the action should at least do no harm. The following policy check list is worth attention today:

Natural gas: Current policy was based on shortage mentality, on the concept of a noncompetitive industry serving a captive market from an almost depleted resource base. Current reality is surplus whose benefits are denied the nation by laws restricting the use of gas while the price is pulled downward by competitive fuels and the most heated gas-on-gas competition in history. The laws regulating prices and markets should be changed to reflect the real world.

Partial deregulation under the Natural Gas Policy Act of 1978 resulted in investment and purchase contract distortions that are major reasons why the market is in chaos today. Particularly, the immediate decontrol of deep gas only directed capital toward the highest cost reserves and led to massive investments in the Deep Anadarko Basin which—when prices collapsed—quickly became a graveyard of stacked rigs rising like tombstones in the wheat and cotton fields along Route 66 from Elk City to Amarillo.

Environmental: Current and prospective energy conditions do not justify a halt in environmental progress. Nevertheless, laws and regulations should be reconciled so that energy development, where permitted—even mandated—by law, is permitted to proceed. Any restrictions on development should stem from real environmental concerns rather than red tape.

Taxes: The present tax reform effort is a little hard to follow, both as to its logic and its path through the administration and Congress. It too should be subjected to an energy test. Tax treatment of oil and gas production is less favorable now than it was before the Arab embargo. Current levels of drilling reflect investors' negative expectations in current tax legislation as well as lower prices. The drilling recovery that occurred in 1984 ended with the publication of Treasury 1, which quite forthrightly set out to drive capital from oil and gas development. This, as well as the windfall profits tax, seems inconsistent with national energy goals.

Trade policy. The U.S. doesn't need import fees that would raise the cost of energy unnecessarily or export controls that impede the development of petroleum resources. The fairness of international trade is an appropriate issue to pursue, but out-and-out protectionism is out or order except for compelling national security considerations.

Emergency planning: Rising imports will of course require an enlarged Strategic Petroleum Reserve. However, the most effective SPR is the productive capacity of all sectors of the energy industry, where capacity can be developed at a reasonable cost.

The important thing is not to have a detailed energy plan. What is critical is that government actions move in a purposeful direction to assure adequate supplies of energy at the lowest reasonable cost, produced and consumed in an environmentally sound manner.

## U.S. OIL PRODUCT DEMAND

(Thousand Barrels Per Day)

| | 0.5% Annual Growth | 1% Annual Growth | 2% Annual Growth |
|---|---|---|---|
| 1985 | 15,667 | 15,667 | 15,667 |
| 1986 | 15,745 | 15,824 | 15,980 |
| 1987 | 15,824 | 15,982 | 16,300 |
| 1988 | 15,903 | 16,141 | 16,626 |
| 1989 | 15,983 | 16,303 | 16,958 |
| 1990 | 16,063 | 16,466 | 17,298 |
| 1985-90 | +396 | +799 | +1,631 |

Source: Oil & Gas Journal

## U.S. CRUDE OIL PRODUCTION

### $10/Barrel

| | Crude Prod | New Wells Oil | New Prod (From 1985) | Total | Shut-In Stripper And Other | Net Crude Prod |
|---|---|---|---|---|---|---|
| 1985 | 8,920 | | | | | 8,920 |
| 1986 | 8,028 | 15,140 | 303 | 8,331 | -985 | 7,346 |
| 1987 | 7,225 | 15,140 | 576 | 7,801 | | 6,816 |
| 1988 | 6,503 | 15,140 | 821 | 7,323 | | 6,338 |
| 1989 | 5,852 | 15,140 | 1,042 | 6,894 | | 5,909 |
| 1990 | 5,267 | 15,140 | 1,241 | 6,508 | | 5,523 |
| 1985-90 | | | | | | -3,397 |

## U.S. CRUDE OIL PRODUCTION

$15/Barrel

| | Existing Crude Prod 10% Decline Rate | New Oil Wells | New Prod (From 1985) | Total | Shut-In Wells | Net Crude Prod |
|---|---|---|---|---|---|---|
| 1985 | 8,920 | | | 8,920 | | 8,920 |
| 1986 | 8,028 | 22,850 | 457 | 8,485 | -625 | 7,860 |
| 1987 | 7,225 | 22,850 | 868 | 8,093 | | 7,468 |
| 1988 | 6,503 | 22,850 | 1,238 | 7,741 | | 7,116 |
| 1989 | 5,852 | 22,850 | 1,571 | 7,423 | | 6,798 |
| 1990 | 5,267 | 22,850 | 1,871 | 7,138 | | 6,513 |
| 1985-90 | | | | | | -2,407 |

Source: Oil & Gas Journal

The CHAIRMAN. Thank you, Mr. Kinney.

Mr. King.

## STATEMENT OF LLEWELLYN KING, PUBLISHER, THE ENERGY DAILY

Mr. KING. Thank you, Mr. Chairman.

It is a pleasure to appear before the committee. I do not think I totally agree with anyone who has appeared today. So I think I shall try and succinctly, if I might, touch on some of the points in my prepared testimony.

First, I have the feeling that there is something of a hidden agenda present. We are really discussing the possibility, the desirability if you will, of protectionism for the oil industry. I would say flat out in terms purely as an energy contributor, that is wholly undesirable. It is not an energy matter. It is a matter of general trade, general national policy, unless we crank—and it is a very serious consideration—the national security one.

Those national security issues are terribly difficult to deal with. In addition to publishing Energy Daily, I also publish Defense Week, and there seem to be two large arguments that I deal with regularly. One is the Arabs are coming, and the other one is the Russians are coming. And these are very powerful arguments because they are hypothetical and we have to make decisions as a society of risk.

We can only build so many Maginot Lines against future hypothetical horrors, and it tends to be the nature of history that the horrors come from elsewhere anyway.

In the 1970's, the entire energy establishment, members of this committee, myself, the former Secretary who appeared today, had a kind of energy hysteria. It was the wisdom that we absorbed, that we were on a permanent energy diet, that it was going to get worse, that it was going to do all sorts of terrible things to us, that we would never again enjoy the same quality of life that we had enjoyed heretofore; that our children would not live as we had, and that energy from any source at any price was desirable.

It brought with it another thought, and that was the thought in corporations that might have had more wisdom in hindsight, and that is if you were in the business of producing energy—and this went for some nations as well—You were entitled to a kind of irreducible wealth. And we saw the nations that made mistakes along these lines—Nigeria, Mexico, and of course, Saudi Arabia, but I will talk about that in a moment.

What happened, and there were some economists at the time who called it right, they were not very popular—there was Fred Singer at the University of Virginia; there was Norman McCray at the London Economist; and there was Bruce Natcherd of National Economic Research Associates—who said wait a minute, economics works. The price has gone up outrageously. Production will increase, demand will fall and, ergo, you will have a surplus.

This was not generally comprehended. It was not the wisdom accepted by the energy establishment of the Western World. It is, of course, what has come to pass. We are dealing always primarily with oil because it is the benchmark that sets the whole tone of the energy business. It is fungible; it has many uses; and it is essential. But it is also a commodity, and it does what commodities do. If you bring two bags of onions to market and there is a demand for 2½, you have a price flyup. And vice versa; three bags, and you have a disaster. We are now in the three-bag situation.

Lots of things have changed in the world since 1973. Oil is being produced, albeit in small quantities. We have not found any new Saudi Arabias, but from part of the Earth that we did not look to, from the Magellan Straits to Australia. I think Senator Rockefeller mentioned this morning that San Diego Gas & Electric was landing $12 oil from Australia. This was absolutely incomprehensible in 1974.

In 1974, the only person I could find who had a serious belief that there would be any large production in the Southern Hemisphere was Donald Rice who was then at the Office of Management and Budget and now is head of Rand and is known to this committee.

These things have happened. The question is to what extent should we come to them; to what extent should we believe our own free enterprise philosophy; and to what extent does that hurt us? And you have to always make the proviso that any sort of projection does not allow for major international hostilities, revolution on our borders, et cetera.

But it would appear that we are in for a price interregnum of about a decade, not 6 years, longer than that. We have current overproduction. We have nations in and outside of OPEC who have a desperate need to sell oil because they have nothing else to sell. And the larger the population, the less the industrialization, the greater the imperative to sell oil. Indonesia, Nigeria, Mexico, Venezuela, you can pretty well add it up by population versus oil production.

The passion to see will be there. If there is a piece between Iran and Iraq, both of those nations will need a lot of hard currency for reconstruction and the only way they will get it is by dumping oil on the world market. There is essentially no OPEC anymore. There is Saudi Arabia which, having something like 63 percent of the world's proven reserves, is always the area we are finally going to have to deal with when this period of crisis which is now in remission passes.

And I think that the Saudis have played rather unskillfully over the years, and not always in good faith. It has been my observation that people always tend to give much greater sagacity to the Saudis than they have. What they have is oil. They are not better off in the brain department than any other nation or any other small nation that I have been able to establish.

They also have somehow cloaked themselves in this kind of divine relevance because they have oil. I do not think that Saudi Arabia would get a mention in this Congress if it were not for that fact. There are other nations of 4.5 million people that are not on the daily agenda, particularly when they live in the sand. It is just the way of things.

And we tend to raise them up in intellectual expectation, but they do have the oil, and ultimately they are going to dictate world oil policy once again. The question is when. In my belief, it will not really be until well into the next decade that this period of soft prices, because of the pressures on price which I have discussed, will continue.

If it continues and if oil falls lower than it is today, its impact certainly on the American industry is going to be quite catastrophic. We are in the unique position of having really the only huge stripper well industry, and we are going to lose much of that. It is going to be shot in. It is going to be a very deleterious impact on the Southwest, on all of our producing areas, with great political consequences.

But it is not the only crisis of its type that we have to look at. The farms, rice belt, are all prices of a similar type where a dependence on an industry has been built up. In modern times where these things come and go very quickly, this is a good way to be. As you know, the railroads thought they had a lock on transportation forever, and in the 1960's Western Union thought it had a lock on communications. Our business cycles are very short.

I believe that the prudent thing for this committee to do would be to have a very keen monitoring of the situation, the expectations for stability in Saudi Arabia and around it, the consequences if Iran were to perservere over Iraq, but in the short term, modest adjustments to existing statutes that I think should be done more as a matter of housecleaning than as new energy initiatives. I think the Fuel Use Act should be substantially amended to allow much greater use of natural gas. I think it should be used for central station electric generation because I think it would bolster the industry if it could write 30-year contracts, and I believe there is sufficient supply to justify this.

I think that Alaska should be able to sell oil to the Pacific Rim if it is able to do so. It is going to be a depressed time in the energy industries, and if oil is depressed, coal is going to be depressed; if coal is depressed, uranium will be depressed.

If, however, you subsidize by one mechanism or another—and subsidy is subsidy with all sorts of ramifications that are seldom seen at the time that a subsidy is introduced—oil production today, with an import fee or some other tax incentive separate from what you are giving to the rest of the economy will tend to increase all energy prices in the United States, because if they are depressed by oil, they are lifted by oil.

And if we lift our basic energy price in this very competitive world, we are giving an additional advantage to our most difficult competitors in Asia, who are in the happy situation now of importing cheap oil from wherever they want it.

We cannot maintain our trading edge in the world as the high-cost energy nation, when we already have high-cost labor. I would suggest that any protection that we afford outside of a national security concern that we afford the oil industry at this point, we will pay for dearly in every piece of manufacturing that we have. No other nation has the need or perceives the need, including the United Kingdom, to protect its oil industry. Protection of the oil industry guarantees high prices and extraordinarily difficult competition in every other sphere of our endeavor.

My suggestion is a very careful monitoring of the situation, a firm commitment to the strategic petroleum reserve which makes a tremendous difference. Our biggest threat is an immediate cutoff. With the strategic petroleum reserve, that is not as threatening.

We have shown that we have not lost our ingenuity, our speed of action, at the rate at which we have just rolled over the transportation fleet in about 7 years. It is, as so many things facing the Nation, a difficult matter of choices which will be greatly exacerbated if the Congress were to take premature action.

You cannot vote the world flat and you cannot roll back the sea. And if there is a lifting price in Saudi Arabia of 50 cents and $17 in Texas, that is going to affect us one way or the other, because the economic reality of that is enormous.

Thank you, gentlemen.

[The prepared statement of Mr. King follows:]

# TESTIMONY OF LLEWELLYN KING

March 14, 1986

# THE ENERGY CRISIS IN REMISSION

Mr. Chairman, Members of the Committee.

I thank you for your graciousness in inviting me to testify today. I understand my assignment is to give a journalistic view of the events of the past 12 years from the Arab oil embargo of 1973-74 to the present day, together with their implications for the future.

A faceious reaction to what I have observed as a journalist over this period is to say that once again the experts were wrong, and that the healthy skepticism, even cynicism, which is associated with this line of work, is not misplaced. The entire energy establishment of the free world became convinced in the 1970s that we were in for permanent oil shortages, escalating prices and economic and social growth constrained by a new and permanent state of energy shortages. Back copies of THE ENERGY DAILY are replete with prophecies of doom from Members of this committee, past administrations, and economists of nearly every persuasion. In 1979, for example, Sheik Yamani told a meeting of the National Press Club that oil would reach $100 a barrel in constant 1979 dollars. Two years earlier, Mr. Jack O'Leary, Deputy Secretary of Energy at the time, dismissed natural gas as a depleted resource not worth bothering with. At that time he said there was only 7 years' supply left and that natural gas could not be taken seriously as a future source of supply.

A few prognosticators using the most basic of economic law, predicted the effective collapse of OPEC and a period where supply would exceed demand, in fact what we're seeing today. They were a small band and did not receive a wide hearing. I am thinking of Norman McCrae, Deputy Editor of the London Economist, Bruce Netschert of National Economic Research Associates, and Fred Singer of George Mason University. Their collective view reached individually was a simple one: if the price goes up, there will be less demand, more oil will come to market and eventually supply and demand will come into equilibrium or supply will exceed demand.

This was not a popular view and it had no constituency, partly because it was believed that there was a unique imbedded demand for oil consumption and partly because the energy industries responded valiantly to the oil crisis but in so doing became emotionally involved as citizens rather than business people, which caused them to adhere to the view that energy was sacred and that a permanent, eternal shortage had started. For many of these leaders, these were heady times when they occupied the national stage and felt that they were doing something of extraordinary consequence for the nation and the world.

What actually happened was that as oil prices climbed, conservation took hold and oil from new sources began to come to market. Briefly, the Gulf States and Saudi Arabia in particular, have ceased to be instrumental in oil supply although in the long term Saudi Arabia will again become not only the most bountiful supplier but the low cost producer.

Recently San Diego Gas & Electric Company landed a cargo of Australian oil on the West Coast at $12 a barrel. Both that price and that supplier could not become envisioned just six years ago.

This delivery is symptomatic of tremendous changes in the world oil market in recent years and the best evidence suggests that, barring revolution, war, or some other major political catastrophy, deals of this nature would determine the oil market for the next decade. There are built-in pressures for downward pressure on the price of oil that should hold it at present levels or depress it further for the next several years and possibly as much as a decade. The ability of Saudi Arabia alone to discipline this market in that timeframe may be very limited. The large populous oil producers such as Nigeria, Mexico, Indonesiaand, to a lesser extent, the United Kingdom, have tremendous pressure to sell oil at whatever they can get for it above their lifting price. In addition, if the war between Iran and Iraq finally draws to a conclusion, both of those countries will require foreign earnings for reconstruction and they have nothing to sell the world besides oil.

This oversupply in the world market is going to have a deteterious effect on marginal producers particularly in the United States where stripper well production is concentrated. The short term result will be closure of many of these wells, possible further bank failures in the Southwest leading to intense political pressure for an import fee which would not be a matter of energy policy but a matter of straightforward protectionism.

As oil is the benchmark for all energy pricing, gas and coal will similarly face hard times and new capital investment will dry up, in its way ironically advancing the date at which oil prices will rise again and Saudia Arabia alone able to play an extraordinary role in dictating the world oil price. It can be concluded that Saudi Arabia is now acting primarily in its own interests in line with the organization of petroleum exporting countries when it suits them and against their interests when the Saudi benefit lies elsewhere. I believe that in a decade we will be talking not so much about OPEC but directly about Saudi Arabia, its motives, its ability to moderate and we will have an even keener interest in the stability of its government. It has been a tennant of popular belief that Saudi Arabia has acted all along as a moderating influence and a friend of the United States. My belief is that Saudi Arabia has acted strictly in its own interests and that that by large has coincided with American interests — for example, by raising the production at one point to 10.5 million barrels a day, and then cutting back to 2.5 million barrels a day to shore up the price. It does not follow that in the latter part of this century or in the next one that Saudi and American interests will coincide. However, absent our ability or will to end the dependence on oil, our future economic well-being may be largely influenced by events in the desert kingdom.

In the 70s a large number of enterprises devoted to the concept of exepnsive oil evolved in the United States. They are now at risk from deep gas wells to solar companies and from coal projects to nuclear power plants.

In short, unless this price interrfonum is wisely managed we will rise again on the oil rollercoaster in the future. But it is unlikely that we will see the same kind of price shocks that occurred in 1973 and 1979. I believe that the supplier nations, including Saudi Arabia, are far more aware of the symbiotic relationship between supplier and consumer and the devastating impacts on world economic growth which can result from a fly-up in the oil price. Energy supply does not appear to be in the near term a serious crisis in the United States assuming normal trading conditions and maintenance of a general peace in the world.

However, the oil situation does raise very serious national security implications which this committee may wish to address. Declining prices and shut-in domestic production will force up imports and bring the United States in due time to an even greater dependence on imports than was the case in 73-74. There is nothing in prospect to reverse this trend and it becomes another security frontier as important as any other which the nation must contemplate.

Our best line of protection against an interruption is the strategic petroleum reserve which can cushion the United States in the event of hostilities in the Middle East or revolution in Mexico or some other upheaval of that magnitude. But there is no strategy for a long term diversion from oil and probably not the political will to fund a massive alternative energy program at a time when oil is seductively cheap.

It is my belief that conservation has been institutionalized as a societal ethic and that cheaper oil prices will not lead to an abandonment of the conservation ethic and although there may be some move to larger automobiles, it is unlikely to be a significant change in consumption habits. The significant impacts are going to be in the commercial use of energy where oil at the burner tip is already shutting out gas may soon back out coal, with serious impact on those industries, their bankers and labor forces.

Looked at purely from an energy point of view, the soft price of oil has serious long term repercusions for the nation. However, it brings with it immediate benefits in revived economic activity at home and abroad and is of considerable assistance to third world countries which have been dependent on importing oil for dollars. It is a cruel fact that those nations which were the most industrious and imaginative in seeking alternatives to oil, such as Brazil with its ethanol strategy, may be the most hurt by this latest swing in the price of oil. We have constantly to remind ourselves that oil is a commodity, an indispensable one -- which imbodies the severest excesses of commodity marketing, dramatic increases in price at the hint of shortage and collapsing prices when there is overproduction.

The aforesaid notwithstanding, it would probably be imprudent for the nation to seek legislative changes in the energy policy at this time. Another 2 years of monitoring would seem to be indicated before the United States moves, or if it moves at all, to design policies to protect it from the world oil market. In the short term, the nation probably stands to gain more from the benefits of cheaper oil than it is threatened by the long term consequences although it is a fluid situation in need of vigilance.

In the short term, there are compelling reasons for increasing the excise tax on gasoline but this should not be confused with energy policy. It is a matter of tax policy, of utilizing a tax system that is in place to raise additional revenues towards the federal deficit. Likewise it may be an opportune time to clean up some of the statutes which are still on the books and which are distorting energy markets. I have in mind in particular in repeal of the fuel use act to allow natural gas additional markets and total deregulation of all gas as it is a time when this can be accomplished with almost imperceptible effect.

Thank you.

The CHAIRMAN. Thank you, gentlemen, all.

Senator Nickles.

Senator NICKLES. Mr. Chairman, thank you and I thank our witnesses, and again I apologize. This is probably one of the most interesting hearings that we have had and one of the ones I am probably more concerned about than most. And it is unfortunate that we have had actually three matters on the floor that can cause myself and the chairman, Senator Johnston, and others to leave.

A couple of comments or questions. I am still, Mr. King, trying to pull out of your statement that the Saudis have 63 percent of the world's reserves. Is that correct?

Mr. KING. I believe it is something in that range. Crude reserves, isn't it?

Senator NICKLES. I just asked staff, and he said on proven reserves, according to EIA and the Oil and Gas Journal, 27 percent of the world.

Mr. KING. I heard from the Gas Research Institute yesterday 63 percent, and at one time it was called at 67 percent. It may be anticipated reserves, but certainly it is the largest known pool of oil in the world.

Senator NICKLES. We will search that out and try and clarify that. But according to EIA, I think we found it was 27. You are agreeing with that figure?

Mr. LICHTBLAU. Yes.

Senator NICKLES. There is no doubt that is the largest reserve?

I have a question for any of the panelists. I think there is pretty much an agreement among most people that the precipitous decline was caused by, as you mentioned, three bags of onions and the demands are two. The Saudis increased their production, by most estimates, Mr. Schuler, I think you mentioned 2.5 million barrels per day?

Mr. SCHULER. 2.5 to about 4.5 million barrels, something like that.

Senator NICKLES. They went from 2 something to 4.5 to 5. So they have increased their daily output about 2.5 million barrels per day from an increase in their production.

That marginal increase, I do not find any other countries in the last few months in this declining period that have had significant output increases. So isn't it primarily just directly attributable to this marginal increase that came from the Saudis?

Mr. LICHTBLAU. Well, it is partly that, but other countries have, of course, also increased their output. You have something now like 18.5 million barrels you had in January of OPEC production. So it was not just Saudi Arabia.

Saudi Arabia was the biggest increase because it was the biggest reduction, cutback in production. It went all the way down to 2 million barrels a day, even though it always had this 4.3 million barrels a day OPEC-assigned production ceiling. All it did was go up to the assigned ceiling and if no one else in OPEC had exceeded, total OPEC production would have been 60 million barrels a day and the price would not have dropped anywhere near where it is today.

It is not that the world is oversupplied. Nobody buys more oil than they need. It is the availability of that much more oil, the instant availability, the impression that you can get more oil at lower prices if you need it. You buy it when you need it and you buy it at a lower price.

Actually, the world cannot produce more oil than is consumed. We do not see any buildup in stocks right now. On the contrary, stocks are relatively low, so the entire reason for this tremendous price reduction is perception and the tying in of crude oil prices with market prices in the market through these net back yields, through spot market deals.

There are no more contract prices, so that the price is as volatile as that of any commodity that is trade on a daily basis.

Senator NICKLES. Don't netback arrangements have a tendency to kind of domino and chase the price? Will that further accelerate its decline but maybe find the floor and reverse that trend at some time?

Mr. TREAT. Senator, I will respond on that. Abu Dhabi and Nigeria also increased production rather markedly over the last few months, so it was not just the Saudi.

Senator NICKLES. How much per day?

Mr. TREAT. My recollection is that there have been 200,000 or 300,000 barrels a day coming out of those two areas above the levels that were prevailing before.

Senator NICKLES. Two or 300,000?

Mr. TREAT. From each of them. So maybe an extra half million to a little bit. On the net back deals, I think they have proven to be very destabilizing.

One of the things they have done is they have removed a built-in self-correcting mechanism that used to exist. When you have a net back deal, if you sell the products you drive in effect the basis of your crude oil down. There is a tendency to effectively reward the quick rather than the wise. If you buy your oil and sell it quickly into the market, you drive product prices down further, but given that the pricing of the crude is determined well after the lifting time, effectively you are reducing your own costs and so you are increasing your own margin. So I think that the net back deals probably have had the effect of destabilizing the market.

Senator NICKLES. I have heard individuals tell me that and I have tried to follow it through. You only have the majors playing that game. Is that not correct?

Mr. TREAT. More and more companies are indeed—the net back phenomenon which was originally just something that the Saudis adopted to encourage the Rampco partners to lift more oil has now spread way beyond the chain of the majors, and indeed we have seen it in the last few weeks indeed even coming up in spot transactions, not just in contract transactions, which means it is becoming very widespread outside the United States We have not seen it inside the United States

Senator NICKLES. Dr. Schuler, you mentioned in your comments—and I agree with you—you disgreed with Dr. Schlesinger and his statement that this was primarily an attempt to focus attention on Great Britain, on North Sea.

Were you saying then that their attempt was to get back their percentage of their quota of OPEC. In other words, even though some rhetoric has been focused at other exporting countries, really the direction being their OPEC brethren who are trying to recapture their percentage of OPEC market?

Mr. SCHULER. I think that is right. I do not think they would have cared particularly where they got it from, but 2½ million barrels a day was not adequate for them, and so they wanted to get it up to their 4.3 nominal quota.

Now, theoretically, Norway, the United States and the United Kingdom could have cut back and let them have that and let the rest of OPEC have what they would grab, but that was not realistic.

So what I think it was really aimed at, getting the other OPEC members to cut back their own production. The problem with that strategy is that as you drive the price of oil down, it is that much more difficult to maintain discipline. The temptation to cheat is that much greater at $15 a barrel than it is at $26 a barrel, because your revenues are less.

So the Saudi strategy, I think, cannot work. I think they are discovering that. The question is, what do they do about it at this point?

Senator NICKLES. Do you think that they started this ball rolling with the objective of recapturing their percentage of the market and now they are looking at it and saying, "my land."

You made some comparisons where they are selling, I guess, 2 million barrels per day and the price, they were selling that at $28 or something, and now they are selling twice as much, 4.5 or even higher in some cases, maybe as much a 5 million barrels per day. What is their benchmark price today? Netback comes back to them at?

Mr. SCHULER. I would think $14 or $15. One of the things about the net back arrangements is that they translate the market pressures very quickly to the crude oil price. There are not a lot of leads and lags in it, so when there is pressure in the marketplace, psychological or real, it is translated immediately back to crude oil prices, and this is why they are no better off today than they were with their 2.5 million barrels.

Senator NICKLES. And maybe in some cases worse off. Plus their OPEC brethren whom they are going to be meeting with this weekend—Algeria and Libya and Iran and others—are in a real bind. Isn't there a tremendous amount of pressure on those countries to the Saudis to get them to——

Mr. SCHULER. An enormous amount of pressure because they simply do not have the financial backing that Saudi Arabia does, the huge builtup reserves which have been drawn down significantly but still are $70 or $80 billion. So the others are hurting worse.

One thing that you cannot lose sight of is we tend to think there is something magical about why Saudi Arabia should have 4.3 million barrels a day, but if you are a Nigerian with 90 million people or an Indonesian with 200 million people, or an Iranian with 45 million people, and you say to yourself why should Saudi Arabia be entitled to over 25 percent of total OPEC revenues when they have less than 2 percent of OPEC population?

So this becomes a factor. Now, we can all say that is irrelevant. It is who can grab the most. But I am convinced that human nature is such and human nature comes into these decisions that are made, that the rest are totally unsympathetic with the Saudi insistence that they should have 4.3.

Senator NICKLES. One final question to the panel, and then I will turn to the Chairman.

With this marginal increase of 2.5 million barrels per day and maybe another half million from a couple of others, but I think there have been some declines, too, from some countries that may offset with that marginal amount of increase, total world production today would be what? Fifty million barrels if you included the Soviet Union?

Mr. LICHTBLAU. Forty-three.

Senator NICKLES. Is that free world?

Mr. LICHTBLAU. Free world, yes.

Senator NICKLES. I was including the Soviet Union.

Mr. LICHTBLAU. Then it is another 12 million.

Senator NICKLES. OK. So 50-some million barrels a day.

Mr. LICHTBLAU. Plus China is another 4 million barrels a day.

Senator NICKLES. OK, so 55 million barrels per day in total production, a 2.5 million barrel increase or 5 percent increase in production has brought a 50 percent decrease in prices in 2½ or 3 months.

Conversely, if the world supply situation changed where you had a constriction of 2 million barrels per day, could you see prices double?

Mr. SCHULER. All we know is that when the OPEC average averaged 16.1 million barrels per day for 1985, oil prices reached $30 a barrel in November. Then the Saudi increase as of the first of September began to catch up, and the perception that John pointed to drove the price back down, but the spot market price was $30 a barrel just last November when the 2.5 million was not there.

Mr. TREAT. Senator, I would just remind you that in 1979 the actual shortage of oil created by the Iranian revolution and cessation of oil exports which brought Jim Schlesinger and me and others to this room back then was around, as I recall, 2.7 million barrels a day for a period of less than three months.

Senator NICKLES. It is really amazing that small an increase in production or that small a reduction in production and the draconian impact that that can have upon the entire world economy.

Mr. KING. Senator, I would like to just, if I might very quickly, add a thought to that. I think that the hysteria that has gone onto the oil market will preclude that sort of runup. Just the existence of the Strategic Oil Reserve will preclude that kind of runup.

In 1979 we had an incredible runup with the Iranian revolution. By 1982 we had two wars in the Middle East and one in the South Atlantic, and already the spot price was decreasing, whereas all the wisdom at that point we anticipated with that kind of unrest, that the spot price would harden.

I think we went through a period that we will not repeat exactly like that. I think there will be a much more gradual tightening in a much more orderly way than heretofore because not the least, Saudi Arabia has hurt itself in supporting the gross runup in price.

The CHAIRMAN. Thank you very much. I enjoyed the questions and I certainly have enjoyed the testimony of the various witnesses. I have read your testimony.

There are just two or three things I would like to explore by question. We are all very good at analyzing the problem or, perhaps I should say, we are much, much better at analyzing the problem than we are suggesting solutions.

One part of the problem that has not been referred to very extensively here, although the latter part of the discussion has touched on it, and that is the way in which the market acts to exacerbate the swings. We do not have any mechanisms, or at least not many that I have been able to see that really reduce the pressures for swings, that level those movements.

Well, it seems to me we have more that accentuate the swings, that make them rise higher and go lower.

Mr. King.

Mr. KING. Mr. Chairman, this of course has been historically a bugaboo of all commodity markets, which is why we have price supports in agriculture, just to offset those swings. And I think that without, you are going to see the swings

I do not see, though, how because of the pervasive nature of energy, how we are going to effectively come up with a regimen that will ease those swings. Large petroleum reserves is one way, but there is no way they can be held in private hands. They have to be held internationally.

One of the things that has happened since the 1970's is that most nations hold much more oil than the pipeline.

The CHAIRMAN. Well, you touch on one of the things that causes swings, perhaps less apparently so now because of other factors than has been the case in the past. With a rapid increase in price, the tendency is also to build stocks.

So apparent consumption, certainly demand, exceed consumption during that period of time. Conversely, when prices start dropping with the presence of more than adequate supply, the tendency is to liquidate stocks inventory and therefore the supply is greater than production for a period of time. The supply being greater, the production has a tendency to drive the price down and, conversely, when price is rising, demand is greater than the consumption and therefore it tends to drive price up.

I guess there is relative agreement on that.

Mr. KING. In oil this may be more volatile than in other products because the price of oil is an artificial price anyway. If it were to be based on a real cost of production, not alas in Texas, but say in the Middle East——

The CHAIRMAN. I am not sure that anything is really priced on the cost of production. It is based upon what you can get for it in the market.

Mr. KING. The market tends to clear ultimately at something just above production in most endeavors, I believe.

The CHAIRMAN. Well, over a long period of time, that is probably true, but I think the oil industry very properly looks at us and said, when prices were rising and margins got large, Congress did not hesitate very long to put a windfall profits tax in effect and siphon off some of that.

Some are suggesting that now as price declines precipitously, the Government ought to give back some of what they took when it was going up. At least I have heard that; I do not suppose any of you gentlemen at the table have heard that discussion?

Mr. LICHTBLAU. We do have a tremendous difference in cost in various areas between various supply sources. At $10 a barrel in the United States, probably most production over time would be shut in. At $10 a barrel, all production in the Middle East would continue to flow, and it would probably increase because the Middle East has 5 or 6 million barrels a day of excess producing capacity.

So, unlike other commodities where production costs are approximately equal, you would not necessarily get a shortage in the world for quite a while at a price as low as $10 because of the very low production cost and the very high excess producing capacity in the Middle East, In some of the African OPEC countries, in Venezuela which is 700,000 barrels a day excess capacity.

So this is one of the destabilizing factors. At the same time, it also enables the world to supply more oil instantly when it is needed. It has come to the point, for instance, where right now Saudi Arabia is not even needed. If Saudi Arabia were to shut down now, this is a historic event, you would not miss it in terms of the ability of the world to supply all the oil that is needed, and that is because of the tremendous excess capacity outside of Saudi Arabia.

The CHAIRMAN. That is one of the reasons why our conditions are a little different today, not just SPRO, but also the decline in consumption worldwide, which is something else I want to get to, not only the decline in consumption but also increase in reserves and increased capacity.

Mr. SCHULER. If I could just add to that point that John made, because I know he will not disagree with this; that while there is a great deal of unutilized production capacity around the world outside of Saudi Arabia, all of it is in OPEC. There is none in the United States, none in the North Sea, none in the Soviet Union, none in Canada, none in the People's Republic of China; it is all in OPEC.

So you have to presume that OPEC is going to be willing to make up whatever happens to Saudi Arabia, and I think there have been times in the past when that is not a realistic assumption.

The CHAIRMAN. There is a second point that I would like to make and see if there is any disagreement at all. We have found tremendous price fluctuation based upon marginal shifts of supply. It happened in 1973; it happened in 1979; it is happening again now.

So that small changes in availability have very large changes in economic effect. Is there any disagreement with that statement?

[Witnesses all nod in the negative.]

The CHAIRMAN. We are also witnessing, while it is all in OPEC, at least in most recent history the Saudis have demonstrated that that marginal supply is within their control. Is that correct, that they can turn on production and drive prices down; they can withhold production and prices stay up?

Mr. SCHULER. Subject to political constraints on that.

The CHAIRMAN. Yes, but just in terms of the world supply, demand, and economic effects. I would agree with you that there is a political constraint and we ought to look at that.

Yes, Mr. Treat.

Mr. Treat. Mr. Chairman, there is a limit, though, to the Saudi action. I think one of the unique situations that we encountered in this past year was that the Saudis were at one extreme of the limits of their action. Saudi production fell to around 2 million barrels a day. Given their internal consumption needs, we are talking about exports of just over a million.

They basically felt they had reached one lower end of their ability to act. They felt they did not have the capability to act further, to cut further. So there are some bounds to it.

In the other direction, they have got production capacity right now clearly at least 8 to 9 million barrels a day, say 8.5, and so they can drive prices down as far as they wish. Their ability last September came to an end in terms of at least their willingness to move prices up.

The Chairman. All right. Because this leads into the next question I was going to ask, if indeed the Saudis have such great leverage all by themselves, but they do not have total leverage, is it not likely that their motive is designed to recreate within an OPEC, not OPEC wholly, but within an OPEC singly, if necessary, the additional concerted action that is necessary to allow them to move beyond the ranges of where they were willing for it to move?

Mr. Treat. Absolutely. I think that is probably the single most obvious goal.

The Chairman. It has been suggested in the discussion with the panel that they are likely to fail. Let me pose it in a slightly different way. They have doubled their production and driven the price down. The total return is about what it was before they increased production.

Therefore, ergo, failure. Is it? Is it failure, or is it likely to say to the other members whose conduct they have to affect, that if you will reduce your production by 15 percent, you can get your price doubled again and your net will be higher at lower production?

Isn't that likely their goal, an achievable goal?

Mr. Kinney. Mr. Chairman, may I respond to that? I do not think the Soviets have failed at all so far in their initiative. I think we have to compare what they are getting today in revenue, which is just about what they were getting a year ago—not with that, but with what they would have gotten this year otherwise, had they not increased their market share.

They were facing a continued rise in non-OPEC production. They were facing new decline in production by their fellow members of OPEC, and so they were looking at a decline in Saudi production as the swing producer to less than 1 million barrels per day in the second quarter.

So that is what we have to compare the Saudi revenues now against. And looking down the road, in perhaps a couple of years had they continued as the swing producer, taking only the residual demand for OPEC oil, their production literally would have dropped to zero. So they had no choice but to do what they are doing now, and I think really compared against the scenario they were looking at, you would have to chalk that up as a success to this point.

Mr. Treat. Mr. Chairman.

The **Chairman**. Mr. Treat.

Mr. **Treat**. A simulation I saw someone do recently pointed out that, as Gene has suggested, that within 2 or 3 years to be a swing producer, Saudi Arabia would actually have had to start importing oil, if you want to use the behavior patterns that have prevailed.

The **Chairman**. Mr. Lichtblau.

Mr. **Lichtblau**. One other point. It is not only a Saudi/Arabia strategy to force other OPEC members to accept the quotas that were set and guarantee Saudi Arabia their 4.3 million barrels a day production; there is also a general concept by Saudi Arabia that the price of oil was too high. They looked at oil demand in the world. They looked at non-OPEC oil supply, and they realized that that $26 a barrel, $28 a barrel oil demand in the world was not increasing; in fact, it was declining.

The share of oil in the world energy market was going down steadily and all the projections showed this would continue right clear into the 1990s. On the supply side, the high price cost continues on new supplies outside of OPEC. So what Saudis and some of the other local producers realized is that at the high price where they got a lot more money, they were steadily losing the energy market to someone else.

The **Chairman**. Before asking my next question, let me posit something on what I heard at the table a moment ago. In 1973 when we had our first shock brought about by a political event, the price of imported oil went from less than $2 a barrel to $14 to $17 a barrel.

Our economies seemed to have absorbed that price adjustment without major disruption of our economies.

In 1979 when about a 3 percent in free world production caused the price of oil to double again, the world economy reeled under that blow. I think there is a general consensus that those two extremes and rather generalized statements are correct.

It has been thus suggested here by some that maybe the price established by the market in 1974 was near the appropriate market price and that the price established post-1979 was obviously wrong and is only now being adjusted back to where it was in about 1974.

You indicate that the Saudis thought the price was too high. If we could get inside their thinking process at all and reflect what their objective was, if their price is—to get it down to what? Are they trying to get it down to $15 a barrel, or are they trying to get it down to $17 a barrel, or is $20 a barrel their objective, or do we know?

Mr. **King**. I believe, Senator, that they are fighting for market share now in a very competitive way. I recall that in 1979 Sheik Yamani came to the National Press Club and said that oil would reach $100 a barrel in constant 1979 dollars, and he seemed to say it with some relish, not with any sense that this might be too high.

The **Chairman**. Did he say that because he believed it or because he wanted to get somebody's attention? Nobody in Congress has ever made a gross overstatement just to get a headline.

Mr. **King**. And nobody in the media. My expectation is, my belief is that the Saudis after that became alarmed that in fact the world could turn with difficulty and expense to other fuels. For example, the total nuclearization of the production of electricity in France;

President Carter's short-lived plan for an $88 billion synthetic fuel. These were warning signs, coupled with the effect of conservation, the decline in consumption; these were warning signs that oil was not exempt from economic laws and at some time could price itself out of the market with catastrophic results, but if you cannot afford something you go hungry after a while. And that certainly happened in much of the Third World.

The CHAIRMAN. Are there other comments about where the price objective might be? Mr. Kinney.

Mr. KINNEY. Mr. Chairman, Yamani also mentioned other numbers. In fact, when the price was going up in the $30s, he stated that he thought $25 was the equilibrium price and that a price above $25, he feared the destruction of Saudi's long-term markets. And it was this reasoning that I believe led to Saudi overproduction to 2 or 3 years to the point that the price that finally went up to $34 collapsed to $29.

But I think their concern about the destruction of markets started when the price went above $25. At least that is based on what Mr. Yamani said.

The CHAIRMAN. Any other comments? Mr. Treat.

Mr. TREAT. Mr. Chairman, there are a number of statments by people quite close to the Saudis recently which can be interpreted to suggest that their objective is somewhere in the vicinity of $22 a barrel.

My own view is that probably is an overstatement. I think that when they assess what is going on and they find that in fact production does not get shut down, say, at $15, but rather, it takes $10 or even lower, that it may be that their target may be slipping.

I would be amazed to find that the Saudis really knew with precision exactly what was going to happen from their action, but my judgment is that probably their goal realistically is somewhat under $20, because if they really want to stimulate demand and they really want to undercut all of the new production that has been coming on, it will probably take a price under $20 to really keep that development from going up.

The CHAIRMAN. Mr. Lichtblau.

Mr. LICHTBLAU. I would agree with that. I agree with Kinney, that they were concerned at one time if it went above $25 they would lose market share, but they have learned since then that $25 is too high because they have lived with $25 and $26 and did lose market share continuously and were expected to continue losing it.

So I think $20, maybe roughly $18 to $20, may be roughly their new target. And some of the oil ministers have talked about that, like Ali Khalifa of Kuwait, $20, $18, for the next 3 or 4 years. I think this what they are trying to get, and they believe at that price demand will increase significantly and non-OPEC production will start declining.

They may be wrong again and they may have to go even lower.

The CHAIRMAN. Mr. Schuler.

Mr. SCHULER. I just want to emphasize again that at $18 a barrel, the need of the other OPEC members to cheat is greater than it was at $26 a barrel. So the Saudi strategy is not going to work to stabilize it at $18 a barrel because the revenues remain inadequate for the other produers, and I would like to just read into——

The **Chairman**. Let me interrupt at that point—I will get back to it—because you have repeated that and that makes me want to question you just a little further on that.

Certainly, the incentives, the need to cheat to get revenues at $18 a barrel is very obvious. But are they capable of learning that if they keep their production up at that level they will not get $18, they will get $12?

Mr. **Schuler**. The alternative that is offered by the other OPEC members, by the hawks—and let's just take it out of the political realm, but you cannot take it out of the political realm—but for point of argument, let's offer it.

The hawks—Iran, Libya and Algeria—want an immediate restoration of $28 a barrel and they then want to tie it to the exact same kind of formula that Yamani wanted in 1980, which is to tie it to OECD economic growth, inflation and currency fluctuations, and let it rise. And surely the demand for OPEC oil goes down, but they are preserving revenues instead of preserving market share.

Now, these are the two alternatives. And the argument on the other OPEC members' part is, if we can get revenues up, we can discipline ourselves a heck of a lot better than we can with revenues down.

Now, the Saudi strategy in my perception is not working on the downside, is not solving the immediate problems which they have got, and they have got to worry about immediate if they are going to be there in the long term. So they are going to look and say, where do we go from here?

Now, they can go to $18 a barrel, but that does not solve the revenue problems. They can go to $22 to $25 a barrel, but their principal adviser, Mr. Mabro, or one of their principal advisers, says that is the worst of all worlds. And I think that, given the political pressures, plus the possibility that the higher price would restore discipline, I can see the Saudis dropping out of the leadership, just as they did all through the 1970s and let the hawks make the running in OPEC because of the combination of the political and revenue requirement.

The **Chairman**. Well, I can see more ways in which it will not work than I can ways in which it will. I do not think either one will work. But something is going to.

Now, that injects another question which obviously we cannot ignore and you mentioned we could not ignore. The political effects, the stability of regimes. That is not just the Saudi. There are a number of other regimes that will be threatened very badly, not the least of which is our friend just to the immediate south of us, Mexico.

Gentlemen, thank you very much for your testimony.

Senator **Nickles**. Mr. Chairman, could I ask a couple of quick questions?

The **Chairman**. Surely.

Senator **Nickles**. I think we heard from DOE officials that say that we are importing 27 percent of our crude today. I have heard other people say that that is now increased to 30 percent.

What do you think that will be in 5 years, just a guesstimate?

Mr. **Lichtblau**. Fifty.

Senator **Nickles**. Fifty?

Mr. **Schuler**. As good as any.

Senator **Nickles**. Does anybody disagree with the 50?

Mr. **Kinney**. A little above 50.

Senator **Nickles**. The DOE official, most of you know, he disagreed. I said 50 and he did not think so.

Mr. **Lichtblau**. Did he think it was going to be higher or lower than 50?

Senator **Nickles**. He thought it was going to be lower and I disagreed.

Mr. **Kinney**. It depends on your price, which number you get.

Senator **Nickles**. I know. And those things are interrelated, but there is no doubt even without price assumptions, the fact that you have 1,200 rigs running today and so on, you would even have a nice price increase, but you are going to have a delay as far as production.

The **Chairman**. I would like to mention just that, too, on the things that exacerbate the swings. It takes a larger increase, a higher price going up to induce increased activity; and it takes a lower price going down to stop activity. So there is a lag in both directions with respect to price relationship.

Senator **Nickles**. One final question.

I heard most everybody on the panel say, well, that their thoughts were that an import fee would be ill-advised, could not be clean, and so on.

Would you agree with this Senator that an import fee would be one thing that would scare the pants off the Saudis if you had this country or other countries that were using this as a mechanism to stabilize oil prices, but where it would make a negative impact on their objectives to increase consumption, world share?

Mr. **Schuler**. I do not know about scaring them, Senator Nickles. I testified to the Senate Finance Committee that I think it is the one thing, the straw that would break the camel's back.

If the consumer is prepared to pay more for the oil and you are the Saudis, why shouldn't you get it rather than let the U.S. Government get it? So at that point, if you have not gotten discipline in OPEC before, you get discipline in OPEC at that point, just to keep the revenues from being transferred from producers to consumers.

Senator **Nickles**. That was my point.

Mr. **Lichtblau**. Yes, I would agree with that.

Senator **Nickles**. An outstanding panel. Thank you, Mr. Chairman.

The **Chairman**. Thank you, gentlemen, very much and thank you for your patience in bearing with us in our interruptions. We very much appreciate your testimony.

We have one more panel of four witnesses, Mr. Charles DiBona, president, American Petroleum Institute; Mr. John Dewes of Chevron Corp.; Mr. Raymond Hefner of Bonray Energy and chairman of Independent Petroleum Association of America; and Mr. Jack A. Blum, Independent Gasoline Marketers Council.

While you gentlemen are taking your seats, I will take this opportunity without extending the discussion, just to make a kind of a generalized report which I think is worth something.

The Oil Import Question: A Report on the Relationship of Oil Imports to National Security. Somebody rushed it into print just so we would have it available for us at this time of national crisis and consideration.

Of course, it is dated February 1970, and it is reviewing the policies that were developed in 1954 and 1955. The reason I make that statement in the way that I did is that this is just as appropriate to the discussion today as it was 16 years ago, as it was when policies were developed 30 years ago. Not all that much has changed.

If you change some names, change some dates and change some figures, it would be very appropriate. One thing that I did note, perhaps should not, because we are talking about foreign policy, we talk about the implications of oil import fees—the man who chaired the Cabinet Task Force on Oil Import Control and signed the letter of transmission is George Shultz who wears a different hat now and, as a result, may have a different opinion now.

We will hear first from Mr. DiBona and, gentlemen, your entire prepared statements will be placed in the record, and you are invited to summarize or highlight in whatever way you see fit.

## STATEMENT OF CHARLES J. DiBONA, PRESIDENT, AMERICAN PETROLEUM INSTITUTE

Mr. DiBona. Thank you, Mr. Chairman.

I am Charles DiBona, president of the American Petroleum Institute. There is widespread satisfaction with the current decline in oil prices. The lower oil prices are immediately beneficial to the national economy in many ways. However, the benefits are not spread out universally.

Lower prices have already caused significant problems in oil-dependent regions and over the long term, the combination of lower investment worldwide in oil production and increased worldwide consumption brought about by lower prices will end the current glut and cause a new set of energy-related problems for the general economy.

In this context the long term may be as short as 3 to 5 years.

The aim of this testimony is not to make predictions, but to indicate what the consequences would be on the current glut if oil prices were to stay at low levels for a sustained period. The situation is still developing and the data is limited.

There is room for difference regarding the precise effect on supply and demand of a particular price level. However, no one disputes the direction of the movement. There is consensus within the industry that the present glut will not be permanent. API believes that if prices fell and stayed as low as $15 a barrel, a reversal would occur within 3 to 5 years.

Others think the timeframe is longer than 5. Few believe that it would take a decade.

Let me first review the impact on current U.S. industry operations. Already announced decreases from 1984 to 1986 in capital spending and exploration production by oil companies in this country amount to $13 billion which translates to a loss of over 250,000 jobs.

The number of active drilling rigs which exceeded 4,000 at its peak stood at 1,248 in late February and I guess is down to 1,211 now. Many expect it to fall below the historically low level it reached in 1971.

These levels imply that domestic oil production will drop significantly in the next few years.

On the demand side, low prices imply a faster growth for oil consumption. The immediate effects are small but they grow over time. So far, the price drops of the past few months have not had time to affect the consumption significantly.

Nevertheless, January deliveries of gasoline and jet fuel in this country were up over year earlier levels by 5 and 12 percent respectively. The total oil consumption was up 1½ percent and this month we estimate that the total consumption is up 5 percent.

Despite the view held by many in the immediate aftermath of the sharp price increases of the 1970's, the unprecedented decrease in consumption which occurred in the following years showed that people's behavior does in fact respond markedly to price changes.

Outside the United States there is likely to be even greater demand response for reduced oil prices than there is domestically, both because the reduced value of the dollar compared with the recent past—and oil is priced in dollars so they have seen a much sharper drop in oil prices than we have over the last several months—and because of the increased growth in prosperity which lower oil prices will foster, particularly in the Third World, in the non-oil-producing part of the Third World.

Worldwide, the combination of falling non-OPEC production and rising consumption produced by significantly lower prices will set into motion the next phase of the cyclical progression of the world oil industry as the current excess capacity is marked up.

The current level of OPEC sustainable capacity is somewhere under 30 million barrels per day, probably in the range of 27 to 30. Historical evidence suggests strongly that the market is dangerously tight when worldwide demand for OPEC exports exceeds 80 percent of capacity.

Let me just stop here for a moment and pass out a paper that came across my desk. Let me just pass that up to the front table. You will see a chart in here that I think answers Senator Nickles' question, one that you were asking Mr. Chairman. There is a table here from a Harvard University energy security project which shows the relationship between the percentage of OPEC capacity utilized and the percentage change in price from the previous year, and you can see that at 80 percent that reverses. And it was not the difference between hysteria and nonhysteria, as Mr. King suggested, which caused the price to rise in 1979 and 1980 and not in 1981 and 1982 as you can see by this chart. It was the percentage of OPEC capacity that was in fact being demanded.

So 80 percent of the OPEC capacity seems to be quite important in terms of what happens to price.

At such a level of demand, the danger exists of explosive price increases or decreases. A realistic estimate of the effect of surplus capacity in the world today, then, is between 5 and 7 million barrels per day—not so much.

Calculations of supply and demand trends, using an oil price of $15 per barrel, lead to the conclusion that this surplus would be absorbed within a period of 3 to 5 years. If you simply use the same elasticities that we used on the way up and assume that they are reversible, out calculation suggests that the number if 3½ years before you are at the 80-percent level.

A feeling of complacency regarding the present situation is clearly not called for. U.S. public policy should be based on a realization that low oil prices would probably not persist over the long term.

Allowing the Nation to become unduly dependent upon imported oil will leave it vulnerable to serious economic and security problems. Domestic resources have to be discovered and developed if we are to be prepared for a time when world oil markets are much tighter than they are currently, and what concerns us is the fact that this shortage on world markets and therefore the difficulty of getting imports will occur just about the time when we are demanding over 50 percent of our supplies from abroad. So it is a very serious situation.

The policies that can help achieve this goal are things like natural gas price decontrol, improved access to public lands for drilling. One might argue that this is the time when we should not put them up. We would argue that this is the time when the best of the prospects should be put on the market because limited amounts are going to be spent and they should be spent on the best drilling prospects on public lands, because if we do not do it now we will not have it in 4, 5, 6, 7 years, whenever this crisis finally does occur.

Finally, of course, equitable taxation. It is hard for us to understand why it is in the interest of the Nation to, for example, have a proposal from the House Ways and Means Committee and from the whole House to significantly reduce IDC's, to add an $8 billion bill to the petroleum industry to pay for Superfund cleanup of other industries' wastes. And it is particularly hard for us to understand, if we understand it correctly, some of the suggestions that were announced yesterday with regard to the Senate Finance Committee's proposal which would eliminate the deductibility for Federal income tax purposes of the payment of the windfall profit tax.

We have had discussions here today about whether or not there might be an oil import fee as a solution to the problem. We currently have what is effectively a negative oil import fee called the windfall profit tax which happens to be an excise tax. And the proposal yesterday was to effectively increase that so, for all oil, it will be at a rate effectively of 105 percent. That is, you will pay 70 percent windfall profit tax. You will not be able to deduct that. Then you will have to pay a 35-percent tax on the dollar which will be 35 cents. The total will be $1.05 on a $1 increase in the price of oil.

Senator **Nickles**. You need to add your severance tax, too.

Mr. **DiBona**. Pardon?

Senator **Nickles**. Add your severance tax, and it is more than that.

Mr. DiBona. That is right. So that what we have here is something that would absolutely stop any production of old oil the minute that its price reached the windfall profit floor.

So you have asked a number of questions about what causative things could be done, and I think that there is a lot to be said about clearing out a lot of the problems that currently exist which should be taken care of, regardless of what price path oil follows, I mean that are counterproductive in every sense.

Thank you.

[The prepared statement of Mr. DiBona follows:]

# TESTIMONY

SUBMITTED BY

CHARLES J. DIBONA

President, American Petroleum Institute

Before the

Committee on Energy and Natural Resources
United States Senate

March 14, 1986

## Summary

- o Since early December 1985, crude oil spot market prices have been cut in about half. Although the oil price drop is adversely affecting some regions of the country, analysts generally agree that the price fall's overall near-term effect on the U.S. economy will be positive. However, reduced oil prices also have important implications for the domestic energy industry as well as for the Nation's longer term economic well-being and its energy security.

- o In response to the recent oil price drop, U.S. oil companies have reduced their capital budgets substantially. Domestic drilling activity already has fallen sharply; many producing wells have been shut in; and domestic oil production is falling.

- o The experience of the 1970s and 1980s clearly demonstrates that over the longer term oil demand and supply in the U.S. and worldwide respond forcefully to oil price changes. The erosion of oil prices between 1981 and late 1985 induced a downturn in drilling activity and a bottoming of the downtrend in oil consumption. The recent dramatic fall in oil prices is accelerating the drilling downturn and stimulating consumption.

- O There is much uncertainty about the future course of oil prices. Much depends upon the behavior of the major foreign producers. However, projections from several sources indicate that, if relatively low prices persist, U.S. oil consumption will rise and production will fall. The same trends will occur in other countries.

- O In a low-oil-price scenario, the growth in demand for OPEC oil probably will absorb most or all of OPEC's excess capacity (currently about 10 million barrels per day) in just a few years. Oil prices then might well rise precipitously.

- O U.S. public policies should be based upon the realization that low oil prices probably will not persist over the long term. The Nation will leave itself vulnerable to serious economic and security problems if it lets itself become unnecessarily dependent on imported oil. Domestic resources have to be found and developed in preparation for the time when world oil markets are much tighter than they are presently. Wise public policies now would remove unnecessary restraints on domestic energy production, and would avoid onerous new ones. Natural gas price decontrol, improved access to public lands for drilling, and equitable taxation are important such policies.

## Introduction

Analysts generally agree that the dramatic fall in oil prices during the past three months is beneficial to the American economy as well as to those of other oil-importing nations. In 1985, the U.S. imported about 1.8 billion barrels of oil. At that rate a $10 per barrel price drop, for example, saves the nation about $18 billion annually. Most analyses of the recent oil price fall have concentrated on such near-term economic benefits. Reduced oil prices, however, also have implications for activity in the domestic oil and gas producing industries, and longer term implications for the nation's economic well-being and its energy security. These implications have not been much analyzed. The following discussion first will provide some background covering the period up to the recent price decline. It then will deal with some of the changes that already are occurring in the domestic oil and gas industry, and then will focus on the longer term implications.

## I. The Period Prior to the Recent Price Decline

World oil prices reached all-time highs in 1981. In the U.S., the annual average wellhead price of crude reached some $32 per barrel in 1981 and then fell to about $26 per barrel by 1984. The wellhead price stayed in the $25-30 range through most of 1985.

The world oil price decline after 1981 is readily explainable. Demand for oil peaked in the late 1970s, declining since in reaction to the price jumps of the 1970s (see Figure 1). At the same time, oil production outside the OPEC countries began to increase. U.S. oil production, which had been decreasing since 1971, stabilized with the coming onstream of Prudhoe Bay production in 1977 and the decontrol of crude oil between 1979 and 1981. Production in other non-OPEC countries, particularly Mexico and the U.K., rose sharply. Total oil production in all non-OPEC countries combined increased on average about 1 million barrels per day (MMB/D) in every year since the late 1970s (see Figure 2). As demand for its oil fell, OPEC cut production. By 1981 the cartel had dropped its production to about 23 MMB/D, compared with a high of about 31 MMB/D in 1977. However, even with the production cuts the market for OPEC oil continued to weaken. Thus, even though OPEC cut production further in following years, it was not able to maintain prices.

The oil price erosion from 1981 through 1985 had both demand and supply effects as consumers and producers adjusted to the change in current conditions and the future outlook. On the demand side, U.S. oil consumption picked up in 1984 after five consecutive years of decline. It stabilized in 1985 but was rising at year's end. World oil consumption also began to increase in 1984, but was stable in 1985.

On the supply side, economic conditions led oil companies to cut their capital spending for exploration and production substantially after 1981 in response to lower anticipated price realizations and financial constraints. As Figure 3 shows, 21 leading U.S. oil companies reduced their domestic capital expenditures for exploration and production by about one-fifth between 1981 and 1984. Figures for these companies' 1985 expenditures are not yet available. However, a recent Oil and Gas Journal survey indicates a total decline in domestic exploration and production expenditures of 21 percent in 1985. Thus, between 1981 and 1985 major oil companies likely cut their E&P spending by over one-third.

Similarly, the number of drilling rigs active domestically fell by about one-half between 1981 and 1985. Consequently, reserve additions in the 1981-1984 period were not sufficient to maintain the reserve base; U.S. crude oil reserves fell by about 1.4 billion barrels between year-end 1980 and year-end 1984 (the latest data available).

In summary the oil consumption decline and production increase that had occurred in response to the oil price increases of the 1970s began to slow and even to reverse in response to the lower oil prices which occurred in the 1980s. Nevertheless, the increases in non-OPEC production and reduced demand relative to earlier years greatly weakened OPEC and put particular pressure on its swing production members. This then set the stage for the events of early 1986.

## II. Near-Term Consequences of the Recent Oil Price Drop

Since early December 1985 when OPEC announced that it would henceforth seek to "defend a fair share of the world oil market," the price of oil has plummeted. U.S. spot market prices have been cut about in half in the short space of just three months. There now is great uncertainty about the near-term course of oil prices. Much depends upon the actions of various foreign producers, including both OPEC members and non-members. However, it is clear that there is considerable excess productive capacity worldwide, and many countries are marketing their oil aggressively in an attempt to maintain their export earnings.

As a consequence of the drop in oil prices, many U.S. oil companies recently have announced substantial cutbacks in their capital spending plans for 1986. Based on a recent survey of companies, the Oil and Gas Journal has estimated that domestic capital spending by all oil industry segments will fall by 24 percent in 1986, following a 19 percent reduction in 1985. The exploration - production segment's spending is estimated to fall by 25 percent in 1986, after a 21 percent drop in 1985. Even this survey, however, was conducted before further oil price declines had occurred. In recent weeks several large oil companies -- including Amoco, Atlantic Richfield, Phillips and Unocal -- have individually announced that they will reduce 1986 capital and exploration spending from previously projected totals by between 20 and 33 percent. One company, Amerada Hess, has announced that it will cut spending by almost 50 percent in 1986.

The financial community has estimated the effects of low oil prices on oil company profits. For example, the investment firm of Salomon Brothers recently concluded that the combined profits of 13 large oil companies would plunge about 70 percent in 1986 if oil prices average $15 per barrel. Another Wall Street firm, Paine Webber, estimates that the profits of several major oil companies would fall by more than 70 percent with oil at $15 per barrel. Thus, although a 24 percent drop in domestic capital spending would be quite large by past standards, this estimate certainly does not appear excessive relative to the potential sharp fall in industry profits.

Financial retrenchments already are becoming manifest in terms of reduced activity in the oil patch. The number of active drilling rigs in the U.S. has plummeted from almost 2,000 at the end of December to 1,248 in late February (see Figure 4), a drop of about one-third. At this rate, the active rig count soon will reach the 1971 level, the lowest recorded in recent history.

Other indications of reduced activity also are evident. For example, the January readings of two leading indicators of domestic drilling activity, active seismic crews and well permit applications, dropped from late 1985 levels. The number of active seismic crews dropped for the sixth consecutive month in January to a level about 10 percent below its fourth-quarter 1985 level (see Figure 5), while January drilling permits dropped 17 percent below their December level.

This drop in oil-field activity will impact domestic employment both in the petroleum industry and in supplier industries. API has conducted analyses of the relationship between reductions in exploration-production expenditures and employment in particular industries. These analyses suggest that for each billion dollar reduction in exploration-production expenditures nearly 20,000 workers will be displaced -- about 11,000 in oil-field employment and 9,000 in supplier-industry employment. Overall, nearly every U.S. industry is affected by a decline in oil industry activity. Table 1 shows the distribution of the potential employment impacts per billion dollars of exploration-production expenditures for the most affected industries. As can be seen, the most affected supplier industries represent a broad cross-section of the economy -- from manufacturing to maintenance and from chemicals to computers. Based on the 1984-1986 exploration-production spending decline of about $13 billion estimated by the Oil and Gas Journal, oil-field

## Table 1

### Workers Displaced Per Billion Dollar Reduction of Petroleum Exploration-Production Expenditures

| Industry | |
|---|---|
| **Direct Effect** | |
| Petroleum Exploration-Production | 10,893 |
| **Indirect Effect** | |
| Machinery and Equipment | 1,217 |
| Primary Iron and Steel | 1,215 |
| Transportation and Warehousing | 958 |
| Insurance | 636 |
| Computer and Data Processing Services | 558 |
| Engineering, Architectural, and Surveying Services | 345 |
| Fabricated Structural Metal Products | 342 |
| Non-Structural Fabricated Metal Products | 315 |
| Eating and Drinking Places | 311 |
| Finance | 221 |
| Equipment Rental and Leasing | 216 |
| Automobile Repair and Services | 199 |
| Other Maintenance and Repair | 183 |
| Wholesale and Retail Trade | 172 |
| Management and Consulting Services | 168 |
| Chemicals | 152 |
| Real Estate | 134 |
| Utilities (Except Natural Gas) | 95 |
| Advertising | 71 |
| Total Indirect Workers | 8,903 |

employment would be cut by about 142,000 and supplier industry employment by about 116,000 between 1984 and 1986. Moreover, capital spending cuts in the downstream segments of the industry will cause additional employment losses.

A cutback in oil and gas activity not only affects many industries, but also many different states where these industries are located. A 1985 study for API by Battelle Pacific Northwest Laboratories showed that the employment effects of offshore exploration and production are spread across all 50 states. While the response to lower oil prices will be a general cutback affecting both offshore and onshore activity, the information about offshore from the Battelle Study is suggestive of how the employment effects of a cutback are spread across the country. The Battelle Study found that the states listed in Table 2 were the most affected by a change in offshore activity. While some of these states -- Texas, Louisiana and Alaska -- are readily identified as oil and gas producing areas, many other states are affected as well. For example, inland states with little direct oil and gas activity such as Ohio, Illinois and Indiana have significant effects from oil and gas activity because their industries supply materials for oil and gas operations.

## Table 2

## States With Large Employment Effects From Petroleum Industry Offshore Activity

Alabama

Alaska

California

Florida

Illinois

Indiana

Louisiana

Massachusetts

Michigan

Mississippi

New Jersey

New York

North Carolina

Ohio

Pennsylvania

South Carolina

Texas

Virginia

Source: Battelle Pacific Northwest Laboratories, "Economic Implications of Accelerated Leasing and Development of Outer Continential Shelf Oil and Gas Resources," June 1985.

In addition to reductions in drilling and other oil seeking activity, domestic production already is being impacted by the magnitude of the recent price decline. Stripper well production is probably most vulnerable to these conditions. A recent survey by the National Stripper Well Association indicates that about 100,000 of the nation's 460,000 stripper wells will be shut in at wellhead prices of $15 per barrel or less. The closing of some of these wells already has occurred, both by larger and smaller operators. Phillips Petroleum, for example, recently announced that it has closed 35 such wells in the Permian Basin, and some small producers have shut down their stripper operations entirely. In most cases it will be uneconomic to ever re-open these wells. Since stripper wells, on average, produce about 3 barrels per day, the closing of 100,000 such wells would reduce domestic oil production by about 300,000 barrels per day.

In general, investment to maintain production is likely to be curtailed where such investment yields marginal or submarginal returns. For example, Texaco recently closed 1,500 heavy-oil wells in California. So far, the total impact on present production still is small. But just from the beginning of the year to late February, domestic production already had dropped by about 30,000 barrels per day. The direction of change is clear; only the ultimate magnitude is still uncertain.

API has sought to make rough estimates of the impact of the recent decline in prices on domestic production in both the short and longer term. Information obtained from an earlier survey of API member companies indicates these impacts may be large. In the survey, companies estimated the impact of one of the recent tax reform proposals on future domestic production. Information obtained from DRI, Inc. indicates the impact of this tax proposal on oil investment was equivalent to that of a $4 per barrel decrease in price. Utilizing the survey response data and assuming that oil prices will be sustained at a level at least $8 below previous expectations, domestic oil and gas production would be expected to decline the equivalent of almost one million barrels per day within one year, with about half the effect coming from natural gas and half from petroleum liquids. This suggests the decrease in production already observed in 1986 is only the beginning of what will occur.

The reduction in oil prices since the beginning of the year is too recent to have had much impact yet on consumption. However, total oil product deliveries in January were up about 1 1/2 percent over the previous year, with especially strong surges in gasoline and jet fuel use. For the month, gasoline supplied was up almost 5 percent while jet fuel rose by over 12 percent. Continued declines in product prices since January almost certainly will stimulate further increases in consumption of these and other fuels.

## III. Longer Term Supply and Demand Consequences of Low Oil Prices

If the recent decline in oil prices is sustained, the longer term consequences likely will be considerably greater than the short term. The API assessment described above indicates that, if an $8 per barrel decrease in price is sustained over several years, domestic production would drop from what otherwise would have occurred by about 2 million barrels per day over five years and by about 3 million barrels per day over ten. These effects alone would have dramatic consequences for future U.S. petroleum imports.

As large as these numbers seem, they probably are conservative. First, the drop in average crude prices over the past few months has been more than $8 per barrel. Second, reductions in E&P activity of the magnitudes contemplated are likely to severely disrupt firms and divisions of firms which specialize in such activity and so decrease their effectiveness. And third, the earlier API survey contemplated prices well into the $20 per barrel range, where the windfall profit tax meant the federal government absorbed a large share of a price fall. At recent lower price levels, the windfall tax is much less a factor, so that price decreases are absorbed much more by producers. Because of these factors, reductions in domestic production from the recent fall in price could be half again as great as above estimated, or as much as 3 million barrels per day over five years and 4 1/2 million barrels per day over ten.

These numbers should not be construed as forecasts of what will happen. Rather, they are assessments of what could happen if oil prices stayed at relatively low levels for several years.

Other organizations also have examined the production consequences of sustained lower oil prices. For example, Data Resources, Inc. (DRI), a consulting firm specializing in forecasting using econometric techniques, has used its Long-Term U.S. Drilling Model to estimate such effects. This model assesses the impacts of several variables -- including oil and natural gas prices, drilling costs, and interest rates -- on domestic energy production.

DRI's U.S. oil production estimates assume that the average crude oil wellhead price will be $15 per barrel in 1986, then fall to $13-14 per barrel in 1987 and 1988, and subsequently rise to $29 in 1995 (prices not adjusted for inflation). Assuming these prices, DRI projects that U.S. oil production (including natural gas liquids) would fall to 8.1 MMB/D in 1995, or about 2.4 MMB/D below its 1985 level of 10.5 MMB/D.

Although DRI projects a considerable production decline if oil prices remain low, its supply projection appears optimistic when compared with still other projections. For example, assuming somewhat higher oil prices than those assumed by DRI, the Energy Information Administration projects domestic oil production of only about 6.7 MMB/D in 1995.[1] This would represent a decrease of 3.8 MMB/D from 1985 levels, or 36 percent. Thus, API, DRI and EIA all project much lower future domestic production if lower prices than previously experienced persist.

A sustained reduction in prices also will impact upon U.S. consumption of oil products. API has conducted analyses of future U.S. oil consumption based on alternative economic growth rates and oil prices. Assuming that the real GNP (inflation-adjusted gross national product) will grow at its long-term trend rate of about 3 percent per year and assuming the same oil prices used by DRI, U.S. oil consumption is estimated to grow to about 23 MMB/D in 1995, or by about 4 percent per year on average.

Although this oil consumption projection is quite different from the experience of recent years, it is consistent with the pattern of earlier decades when oil consumption grew rapidly. It also projects that people will respond to lower prices as they did to higher ones. Thus, just as there was a strong negative demand response to prolonged relatively high oil prices, oil demand is expected to respond positively to prolonged much lower prices. This price effect along with assumed future growth in economic activity is expected to increase oil consumption considerably.

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[1] U.S. Department of Energy, Energy Information Administration, Annual Energy Outlook: 1985, January, 1986.

Again, it should be emphasized that this is not a forecast of what will happen. Rather, it is a projection of what could happen if much lower oil prices than in earlier years persist over a long period.

Together, the low-oil-price supply and demand scenarios suggest that U.S. oil imports would grow substantially -- from about 5 MMB/D in 1985 to about 10 MMB/D in 1990 and to about 15 MMB/D in 1995 (see Figure 6). OPEC currently produces 16-18 MMB/D and has an estimated total productive capacity of about 26-28 MMB/D. Thus, a 10 MMB/D increase in U.S. demand for imported oil, in itself, would absorb most or all of OPEC's total current excess productive capacity.

Moreover, the same reactions to low oil prices -- increased consumption and reduced production -- are likely to occur in other non-OPEC countries. Indeed, there are several reasons to expect even sharper reactions to the oil price drop in foreign nations than in the U.S.

First, the international value of the dollar has fallen substantially during the past year. The Federal Reserve

Board estimates that measured relative to a basket of ten foreign currencies the dollar's international value has fallen by about one-third since last March. Hence, during the past year the price of oil in terms of most foreign currencies has dropped by even more than the dollar price of oil. Hence, foreigners can be expected to increase their demand for oil by relatively more than Americans increase their oil consumption.

Secondly, a reduction in the cost of oil imports is likely to bolster many foreign economies relatively more than the U.S. economy. As stated above, a $10 per barrel price drop reduces the U.S. oil import cost by about $18 billion per year. But this is a relatively small saving in a more than $4 trillion economy. Many foreign countries are more heavily dependent on oil imports. Japan, for example, imports almost as much oil as the U.S., but its economy is only about one-third as large. And the economies of many underdeveloped countries in Asia, Africa, and Latin America have been severely crippled by high oil import costs and will be greatly helped by lower oil prices. Thus, lower oil prices, through their positive effects on economic growth, are likely to stimulate oil demand particularly in those countries that are heavily dependent on oil imports.

However, there is only a limited amount of excess producing capacity worldwide. The likely net result is that long before this capacity would be fully utilized there will again be upward pressure on world oil prices. Previous experience indicates that when even 80 percent of OPEC capacity is utilized -- or only about 22 MMB/D -- prices probably will rise. Thus, demand for OPEC need rise by only 4-6 MMB/D for this point to be reached. The OPEC countries, which together hold about three-quarters of the non-Communist world's oil reserves (and about two-thirds of total world reserves), would then once again be in the driver's seat. This means that pressure on individual OPEC member countries to exceed their production quotas will decrease because the increased demand for OPEC oil will tend to firm world oil prices. In other words, cartel members will be under less pressure to sell more oil, and indeed will find it possible to reduce production while sustaining acceptable levels of income.

No one can be very precise about the timing of this process. The reaction of consumption to low oil prices might be more delayed or less pronounced than past experience suggests, or there may be important new oil discoveries. However, it appears quite likely that, if oil prices remain at or near current levels, most of OPEC's excess capacity will be absorbed within a very few years. The price of oil then probably would rise, and it could rise sharply. Thus, the U.S. not only cannot be assured that oil prices will stay down over the long-term, but there are strong reasons to believe the opposite would occur.

## IV. Public Policy Implications

Policies to encourage domestic energy exploration and development today directly affect not only current circumstances but energy security at least until the turn of the century. Just as the domestic petroleum that America produces today is available because of investment decisions made in the past, the investment decisions that federal policy can affect today will provide the petroleum that offsets imports during the 1990s and beyond. If world petroleum markets are likely to tighten in the 1990s as implied by the assessments above, now is the time to choose appropriate long run policies.

Some proposed public policies do not appear to recognize this reality. For example, some recent tax reform plans proposed that the expensing of intangible drilling and development costs (IDCs) be eliminated for federal tax purposes and that capitalization of IDCs with recovery through cost depletion and depreciation be required instead. An API study of the potential impact of this proposal found that it would reduce drilling activity and decrease domestic oil and natural gas production by almost 900,000 barrels of oil equivalent per day within five years and by 1.6 MMB/D within ten.

The House-passed tax reform bill stops short of total elimination of the expensing of IDCs but does contain onerous restrictions on such expensing. Moreover, HR 3838 also contains other provisions that will adversely affect domestic petroleum investment. These include repeal of the investment tax credit, a drastic reduction in the percentage depletion allowance for independents, and a lengthening of capital investment depreciation periods. A recent API-sponsored study estimated that enactment of this bill would reduce domestic oil and natural gas production by about 775,000 barrels per day of oil equivalent in 1990 and by about 850,000 barrels per day in 1995.

These are two examples of unwise tax policy. They would make the nation more dependent on oil imports and hasten the day when foreign producers can once again hike oil prices. Yet, some observers argue that such policies are desirable because they would preserve domestic resources for future use. This argument ignores several important facts. We do not now know exactly where domestic resources are located or in what quantities they exist. In finding and developing these resources, the industry cannot be turned off and on like a spigot; lead times are long, five to ten years or more, and skills must be maintained. Continual search and technological advance is required to reveal America's energy resource base and find a way to recover more of it economically.

This process does not occur in a vacuum; it is intimately tied to current exploration and development activities that continually test geological and engineering recovery theories and techniques and suggest new ones. These activities not only make oil and natural gas available for present use, but prepare the way for finding and recovering even more. In this sense, current activities affect not only energy security in the near to mid term, but in the far distant future as well. If we drastically curtail the search for new domestic oil and gas today, we lose expertise that will be valuable - even vital - later on. Moreover, a search delayed until that future is upon us could not pay off for five to ten years after that.

Another common argument is that U.S. oil demand should be dampened by a tax on oil. Higher U.S. oil taxes no doubt would cut oil demand in the U.S., but they would not cut foreign consumption which comprises some two-thirds of the total and which probably will grow. Further, such a tax would have important adverse effects on the U.S. economy. It would weaken the ability of American firms, particularly heavy energy users, to compete internationally; it would reduce overall economic efficiency as firms substituted other resources for energy whose cost had been artificially increased; it probably would accelerate inflation; it would discriminate among regions and classes of consumers; and in all likelihood it would become administratively complex, as special treatment is given to many interest groups.

Discriminatory tax treatment -- such as the House Superfund bill, which would require the oil and chemical industries to fund over 80 percent of a 5-year $10 billion effort to clean up abandoned toxic waste sites -- was wrong last year and is doubly wrong in the current situation. These two industries are responsible for only a small fraction (about 15 percent) of abandoned wastes. So, it would be inequitable to require them to fund over 80 percent of the clean-up effort. To do so now when the petroleum industry is faced with a financial problem that has important implications for the nation's energy security and economic well-being would be even more inequitable and irresponsible. The cost of financing this essential societal effort should be spread more broadly through the total economy.

Wise public policies towards energy would move to eliminate unnecessary restraints on domestic energy production -- through natural gas price decontrol, removal of moratoria and other barriers to access to public lands for drilling, and equitable taxation policies, including removal of the windfall profit tax which is in fact a discriminatory tax on domestic crude oil production. Through such policies, the U.S. can put itself in a position where it is less vulnerable to untoward events in international oil markets like those that occurred in the 1970s.

Figure 1
U.S. and Other Free-World Oil Consumption

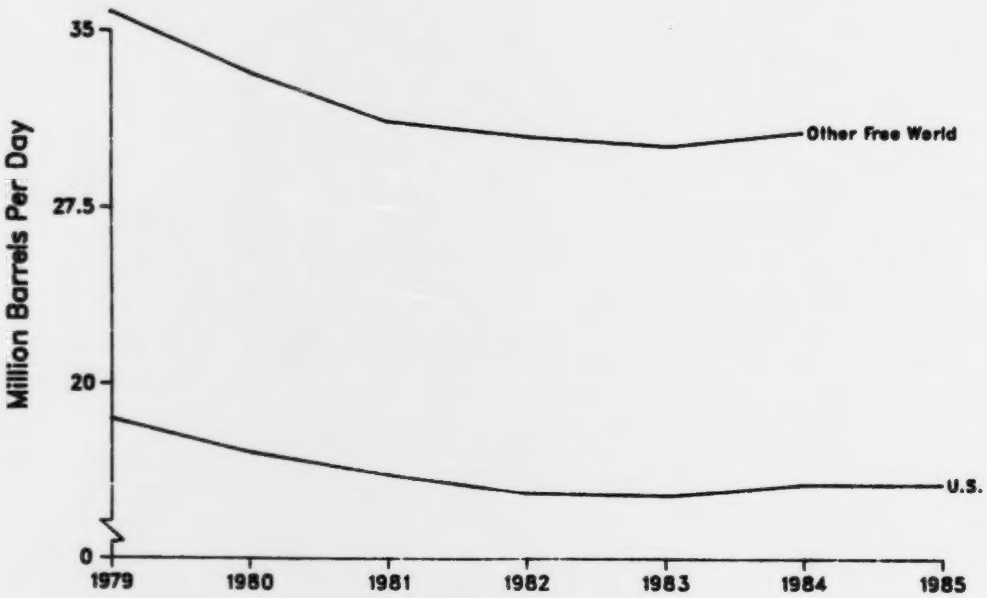


Figure 2
U.S. and Other Non-OPEC Crude Oil Production

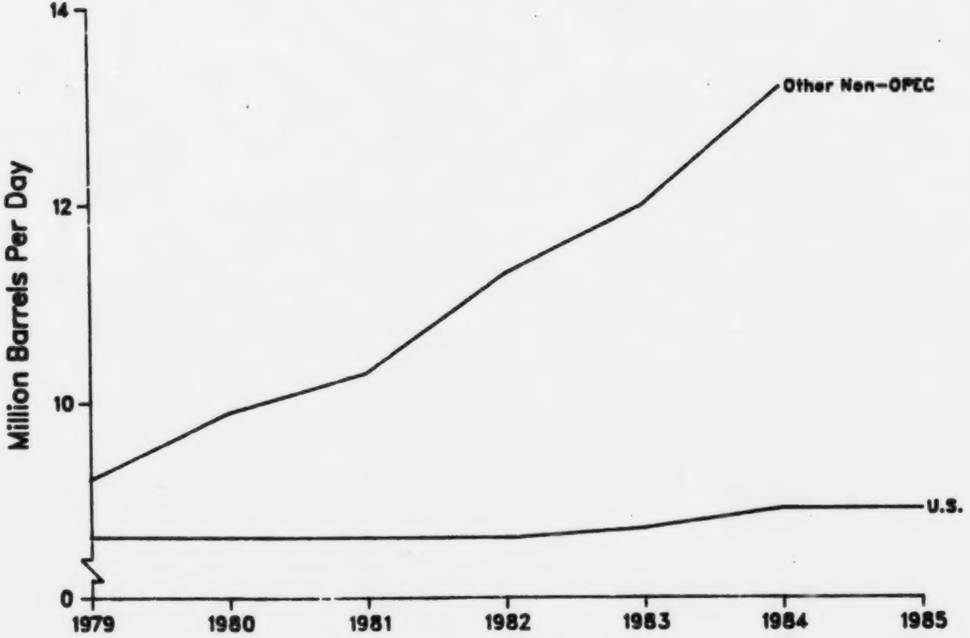
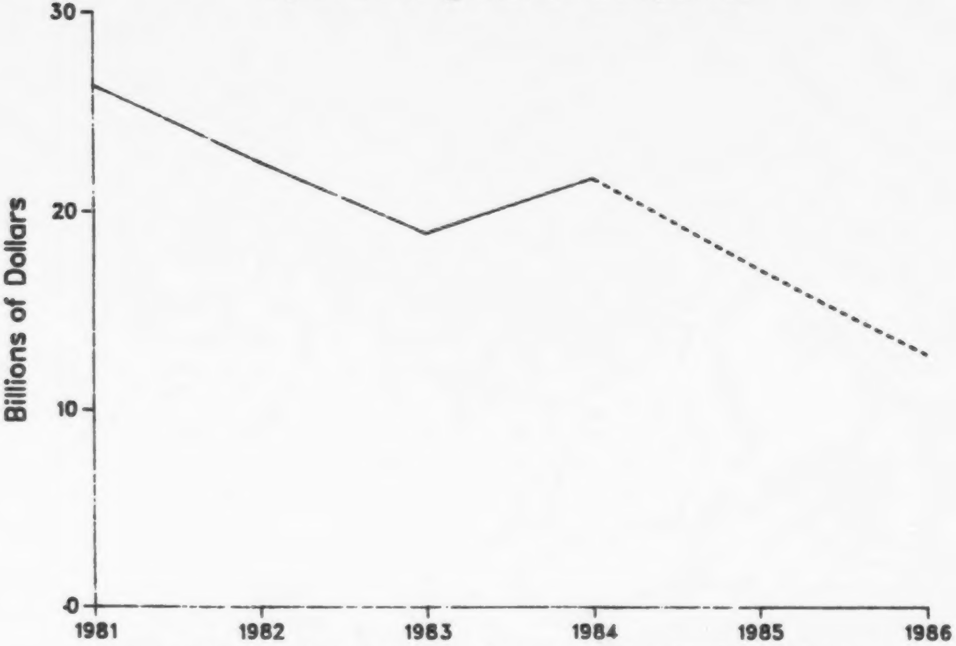


Figure 3
Capital Spending for Domestic Exploration and Production
By 21 Leading U.S. Oil Companies



Source: American Petroleum Institute. Values for 1985 and 1986 are estimates based on Oil and Gas Journal estimate for 1985 and projection for 1986.

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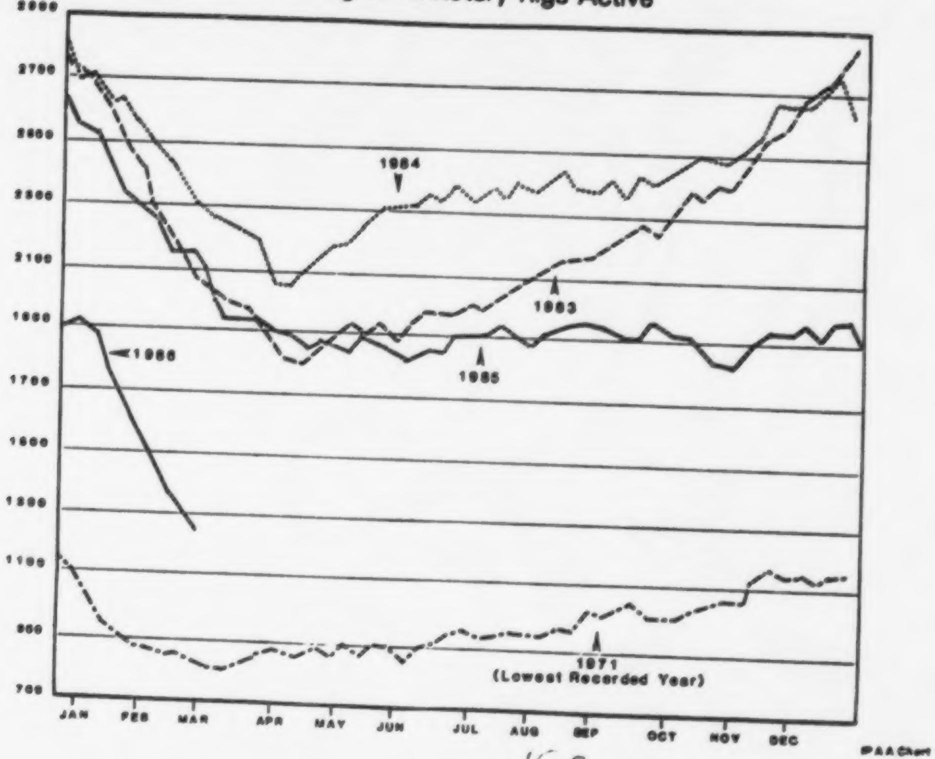
Figure 4: Rotary Rigs Active



IPAA Chart

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Figure 5
Active Seismic Crews in the U.S.
Fourth Quarter of Each Year

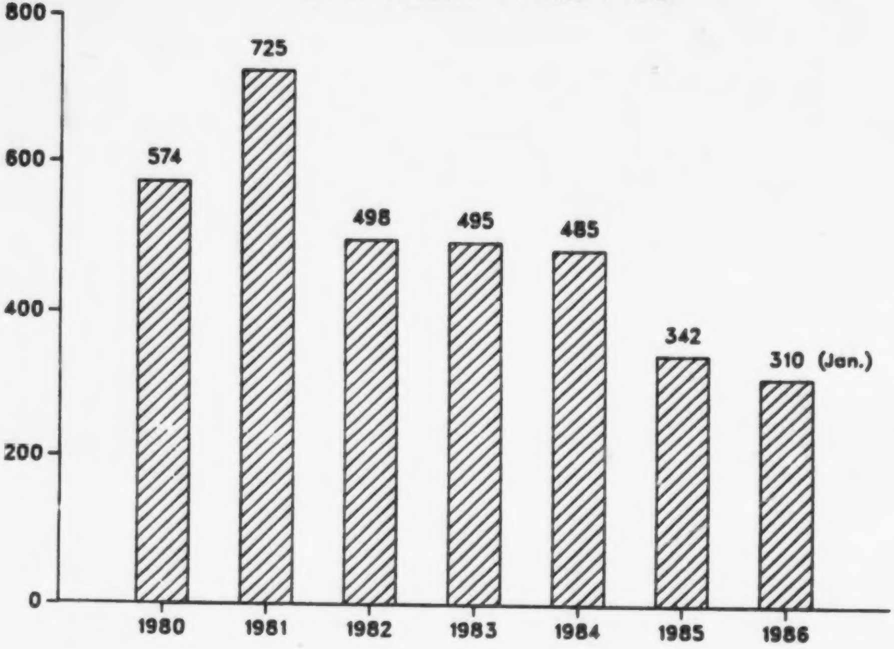
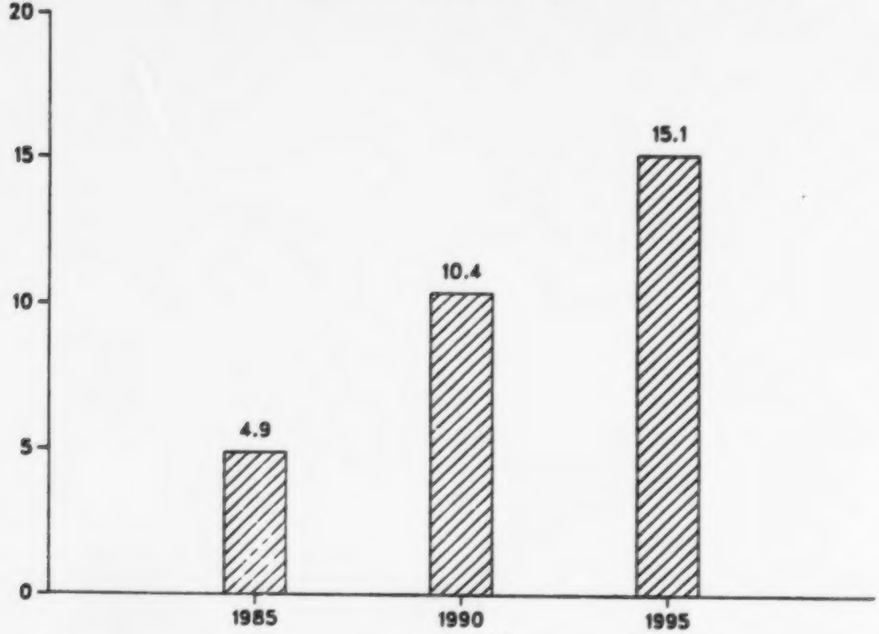


Figure 6
U.S. Oil Imports: Low-Price Scenario



# OIL MARKET RISK ANALYSIS

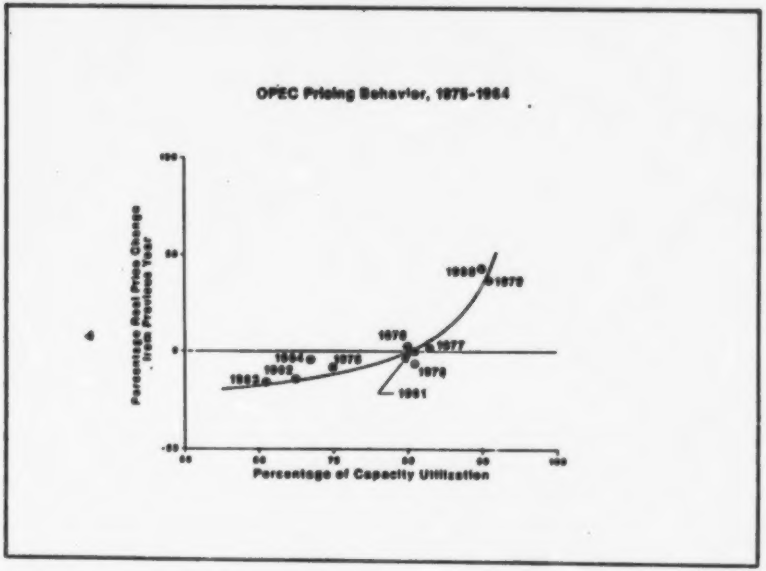
William W. Hogan and Paul N. Leiby

Report of the Harvard Energy Security Project

Energy and Environmental Policy Center
John F. Kennedy School of Government
Harvard University
Cambridge MA.

December, 1985

# PRICE RESPONSE FUNCTION USED IN HOMS*



Note: From U.S. Department of Energy, Energy Information Administration, "Annual Energy Outlook 1984," Jan. 1985, p.58.

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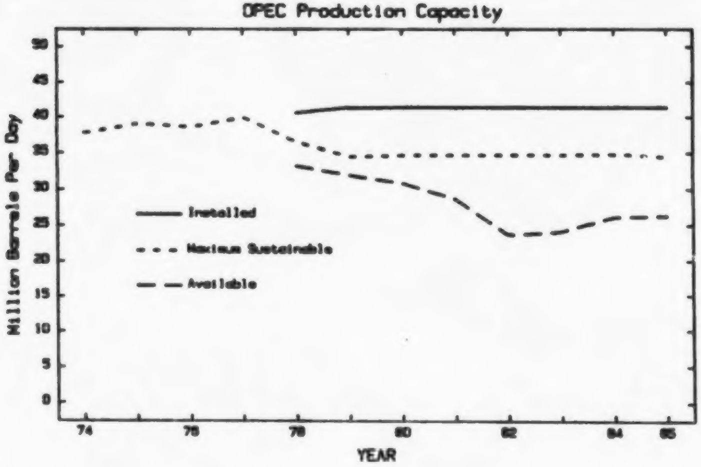
*Harvard Oil Market Simulation

# ALTERNATIVE OPEC CAPACITY DEFINITIONS
## Three CIA Definitions



Note: Data from the CIA, International Energy Statistical Review, miscellaneous issues. See text for the definition of each data series.

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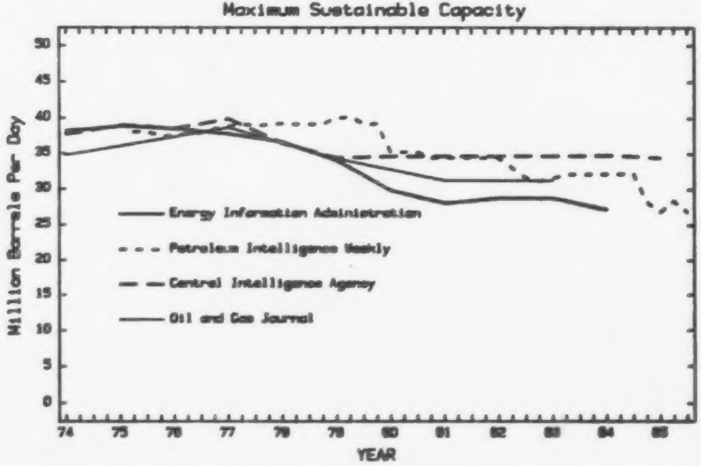
# HISTORICAL OPEC CAPACITY: Estimates Differ



Note: EIA data from OMS model documentation. CIA data from International Energy Statistical Review. Oil & Gas Journal Data from OGJ online database. Maximum sustainable capacity is the "maximum rate that can be sustained for several months."

The **Chairman**. Thank you.
Mr. Dewes.

## STATEMENT OF JOHN W. DEWES, GENERAL MANAGER, ECONOMICS DEPARTMENT, CHEVRON CORP.

Mr. **Dewes**. Thank you, Mr. Chairman.

I am the general manager of the economics department for the Chevron Corp. and I appreciate the opportunity to appear here.

You have heard testimony from the previous panel on the dramatic fall in oil prices and the factors that led to that fall. I am not going to go over the ground again. Our detailed analysis is in our written statement which of course is in the record.

I would like to start with two observations on the world supply and demand balance. First, I think the one thing that energy economists learned from the 1970's is that even though oil demand is very price-elastic, it is subject to very long time delays. Coupled with the investments that energy consumers have made in conservation, this tells us that demand is not going to increase very quickly and we probably will not return to the very high growth rates in oil demand that we had during the 1970's.

Second, on the supply side, because of the high capital investment and relatively low production cost, much of today's crude production is going to continue in spite of very low prices. I recognize that there is obviously a lot of marginal production that will be impacted.

So demand will increase. Non-OPEC supply will fall, but not overnight, and this is probably where I differ a little bit from Mr. DiBona is in the timing, but certainly not in the direction of this balance coming back together again.

So our summary of the short-term situation is that in the absence of some new OPEC agreement that would limit production, prices are going to remain low because the supply-demand balance will not allow OPEC to reach its desired market share, and this effort to put more oil on the market which was discussed on the previous panel will keep prices down.

If OPEC, with perhaps some tacit support of non-OPEC producers, can reach some kind of an agreement, we would expect a price that would settle out in the low $20's, but we do not certainly put a very high probability on this.

In the more likely case that no agreement is reached and the market determines the price level, we would expect probably $10 to $15 a barrel to be the range for an extended period of time.

Now, we cannot argue that in the short term at least that oil prices and lower energy prices, because oil is going to bring other energy prices down, that there will not be benefits to the consumer and to the economy. Lower inflation, lower interest rates, higher economic growth are all positive factors.

But as others have said before me, we should not ignore the longer term impacts and this supply/demand balance will shift in time to bring control back to OPEC and the Persian Gulf, as we discussed before.

Now, last year, we were basing our productions on oil declining to perhaps $25 a barrel and then gradually increasing after 1990.

There is a chart, which is the last page in my written testimony, that demonstrates our view of where the United States would be in terms of percentage of imports by the end of the century.

And this would show that we would be roughly, in our projection of a year ago, at about 50-percent import dependence by the end of the century. However, at lower prices—and if we use $15 as an example—imports would be perhaps 1½ to 2 million barrels a day higher within just 2 to 3 years, and we would certainly be moving to the 50 percent dependent point very rapidly, which would of course raise national security concerns.

This chart also shows the typical 10-percent-per-year decline in existing production that is normally offset by new investment, both in developing existing fields and in new fields. Now, if that investment falls off, whether it is due to low prices or reduced capital incentives, or lack of access to find and search for these potential reserves, or if it just plain increased taxes, and these conditions persist, we expect that we would be perhaps 80 to 90 percent dependent on imports by the year 2000.

Another longer term factor we should remember is the longer leadtime for developing the reserves, especially offshore. We cannot wait for the next crisis to begin exploration or even development. Offshore leasing programs should continue in a deliberate manner to allow the evaluation of these potential areas.

Now, some final observations. I think we have to be realistic. At best, we are going to have an extended period of low prices, reduced earnings and curtailed capital and exploratory programs by the industry. This does not mean the industry is looking for a Government handout, but it does follow that this is not the time to increase the tax burden on the industry.

Many obviously think that the industry has deep pockets, but we cannot be expected to be the "cash cow" which provides an out-of-proportion share of the tax burden.

Others have mentioned many items. Clearly among them would be maintaining capital formation incentives, certainly a broader sharing of the Superfund tax are examples of tax impacts that we need to consider the burden on the industry in deciding on these items.

In closing, it is obvious that the situation is very volatile, subject to rapid change, and is largely unpredictable. Our recommendation is that both industry and the Government need to remain flexible and keep their options open in the event that the situation goes from what people would call today bad, to worse.

Thank you.

[The prepared statement of Mr. Dewes follows:]

## TESTIMONY OF
## J. W. DEWES, GENERAL MANAGER,
## ECONOMICS DEPARTMENT, CHEVRON CORPORATION
Senate Energy Committee
March 14, 1986
Washington, D.C.

### Introduction

The last time oil prices moved as suddenly and as far as they have in the last three months, the situation was radically different from today. Only seven years ago, prices were rising rapidly in response to short-term supply disruptions of a political nature following the Iranian revolution. Consumers were incensed at shortages and spiraling prices; regulators were unable to cope with the conflicting demands of a complex marketplace; and the oil industry was frustrated by being prevented from doing what it does best -- supplying liquid petroleum fuels at market prices. The complex price control and allocation system in place in the U.S. at the time, if not the fundamental cause of the problems, at the very least made a bad situation considerably worse.

Since decontrol of crude oil in the U.S. in 1981, prices have declined steadily, supply has been enhanced, and OPEC's ability to control the oil markets has been seriously if not fatally weakened. Consumers have also played their part, reducing worldwide consumption by 17% from the peak as a result of conservation and improved efficiency. Steadily falling oil prices have helped bring inflation under control, stimulate the economy and reduce the dollar outflow for oil imports.

In the past three months, however, this gradual erosion of oil prices has turned into a free fall. Spot prices for West Texas Intermediate crude have fallen from more than $31 per barrel at the end of November to about $13 per barrel late last week. This has raised a new set of concerns about the oil industry (Chart I, Spot Crude Oil Prices).

In the seventies, some of the dislocations were caused by the amount of the price increases but much harm was also done by the rate of increase. The economy doesn't adapt as easily to rapid changes as it does to changes which are spread over a period of time. Thus, there is legitimate reason for concern about the potential impact of sharply falling prices.

## Background

Prices are falling today because of the straightforward interaction of supply and demand and because OPEC, led by Saudi Arabia, has declared its unwillingness to continue to bear the burden of production restrictions in support of the previous price level. The problem for OPEC is that its members collectively have current crude production capacity of at least 25 million barrels per day and potential capacity, assuming resolution of the Iran-Iraq war, of over 30 million barrels per day. With 1985 production averaging less than 16 million barrels per day (64% utilization) and current production at only about 70% of current capacity, it is easy to see why OPEC has had difficulty enforcing its quota agreement. OPEC's crude oil production today is only slightly more than half what it was during the peak production years (Chart II, OPEC Crude Oil Production).

Both sides of the supply/demand balance have contributed to this squeeze on OPEC production. Non-communist world oil demand has fallen by 6.7 million barrels per day from the 1979 peak of 52.7 million barrels per day. This has cut into the demand for oil from OPEC.

Over the same period, non-OPEC crude production has risen by 4.8 million barrels per day to a 1985 level of 22.4 million barrels per day, also helping to reduce OPEC's share of the market. In the U.S., similar changes have taken place: demand is down by 2.9 million barrels per day since 1979 and total domestic supply is up by 0.5 million barrels per day. The result is that net imports of crude and products declined by almost 3.4 million barrels per day from 1979 to 1985.

The current dilemma for OPEC is that neither supply nor demand is particularly responsive (elastic) to price changes in the short run. As long as some hope remains that prices may recover, non-OPEC producers are unlikely to make what are often irreversible decisions to shut-in production which is marginally uneconomic at today's prices. Major non-OPEC producing countries like the U.K. and Norway have so far shown little inclination to curtail production in support of higher prices.

On the demand side of the equation, it is important to understand that over 80% of the cumulative decline in world oil demand since 1979 has been the result of substitution of coal, nuclear power and natural gas for heavy fuel oil used in electricity generation and industrial boilers. Because of the large capital investments and long-term supply contracts required to convert to these substitute energy sources, utilities are unlikely to switch back to oil to gain what may be only a temporary price advantage. One thing that energy economists learned as a result of the price increases of the seventies is that although oil demand is elastic, the elasticity is subject to considerable time lags. Furthermore, past conservation investments strongly suggest that the response to lower prices is not likely to bring the world back to earlier growth rates.

## Short-Term Petroleum Consumption

World oil demand increased in 1984 for the first time since 1979 due to the U.K. coal strike and to the strong economic recovery in the U.S. During 1985, demand resumed its decline in all the major oil consuming industrial nations who are members of the Organization for Economic Cooperation and Development (OECD) as the coal strike ended and economic growth receded from 1984 rates (Chart III, Petroleum Consumption).

Prior to the recent sharp price declines, 1986 worldwide petroleum consumption was expected to grow only very slightly, based on economic growth patterns similar to 1985.

With falling oil prices, worldwide economic performance can be expected to improve again in 1986. Although it will take time, oil consumption levels could begin to creep upward by the second half of the year, resulting in higher consumption than presently forecast.

Although oil consumption is expected, over time, to respond to lower prices, it is useful to analyze the factors contributing to the worldwide decline of 6.7 million barrels per day over the past six years in order to gain a perspective on the prospects for a recovery in petroleum demand (Chart IV, Decline in Oil Demand).

Of the cumulative decline, 5.4 million barrels per day are related to the drop in the consumption of heavy fuel oil which has been replaced by coal, nuclear power and natural gas in electricity generation and industrial boilers. Because of the large capital investments made to permit use of these substitutes for oil, it will now be very difficult for oil to recapture these markets. However, if fuel oil prices remain low enough to compete with coal for an extended period, oil will begin to regain some of its lost boiler fuel market. Also some fuel oil used as ship's bunkers and in industrial boilers will also increase as lower oil prices lead to higher economic growth.

The cumulative demand decline for light products (gasoline, kerosene, jet fuel and heating oil) of 500 thousand barrels per day represents only 7% of the total decline and was more related to conservation, improved energy efficiency and lower economic growth rates (1980-2) than to substitution. Significantly, light product consumption has been growing since 1983, which is expected to continue. Products in the "other" category (waxes, lubes, asphalt and LPG) should also continue to grow since demand for these products is largely a function of economic activity. As a result of conservation and investments in improved energy efficiency, products in both of these categories are growing at much lower rates than they did prior to the oil price increases.

The only prospect for a sharp increase in short-term oil consumption would arise if fuel oil prices were to fall to extremely low levels (say, about $10 per barrel) so that fuel oil could compete directly with higher cost coal. The utilities have the obligation, but only limited ability, to switch to the lowest cost fuel in order to minimize their costs -- which are passed through to consumers -- and such a switch would take time to implement. Long-term coal contracts and facilities which are designed for a particular fuel suggest that the switch might be limited to about 1 million barrels per day worldwide in the first couple of years. If economic activity experiences a sudden surge, old oil burning facilities could be called upon to provide the additional energy required side by side with existing coal burning facilities.

**Short-Term Petroleum Supply**

Since 1979, total non-OPEC supply has increased 5.5 million barrels per day, adding to the market pressure on OPEC. These new oil supplies have been created by the investment of considerable amounts of capital. It is characteristic of the oil business to be capital intensive, but due to economies of scale, also to experience relatively low unit operating costs, exclusive of capital charges. This means that oil production will only start to be shut-in when prices fall below the out-of-pocket operating costs.

Nonetheless, we have already started to observe that non-OPEC production is likely to be lower in 1986 than we had anticipated toward the end of last year (Chart V, Non-OPEC Supply). For the first time since 1975, non-OPEC crude production appears to be heading for a year-to-year decline. In any event, it now seems likely that earlier estimates of 2% growth in 1986 will not be met.

These changes are probable for a variety of reasons. Turbulent markets make some crudes temporarily uneconomic to refine, and lost sales are difficult to make up, resulting in lower average production. Some producer countries have already indicated that they will reduce production as a gesture in support of the price structure. In addition, production costs in the U.S. tend to be high, relative to the rest of the world and some marginal wells which either have low production rates or high water/oil ratios may exceed the market price, leading to shut-in. Finally, development drilling programs required to maintain current production levels will start to be curtailed, leading to more rapid declines in producing fields in the future.

In the United States, if we assume that prices settle in the $10 to $15 per barrel range, we would expect to see a production decline of 150,000 to 250,000 barrels per day in 1986 as high cost stripper wells are shut-in and some new project development is deferred due to low prices. By 1988, we estimate total U.S. crude production could be down as much as 600,000 to 1.2 million barrels per day from current levels. In addition, the service industries, including drilling contractors and other support companies will be severely impacted, with numerous business failures likely. If the period of low prices is prolonged, the U.S. industry will have difficulty recovering, as many of these impacts are not easily reversible.

## Short-Term Supply/Demand Forecast

The first quarter of 1986 is experiencing a normal winter season demand pattern. However, this increase in demand is not translating into a corresponding increase in OPEC production because the inventories (including those on the water) which were built up at the end of 1985 are being reduced this quarter. In the absence of any agreement by non-OPEC producers to restrain their production even further, OPEC production must compete in the marketplace and may fall in the next two quarters.

For the year 1986 as a whole, demand for OPEC oil amounts to about 16.1 million barrels per day, far below OPEC's desired "market share" of 17.5-18.0 million barrels per day. If oil prices become competitive with coal, some increase in demand -- perhaps as much as 1 million barrels per day -- could occur. Even in the absence of a production sharing agreement, non-OPEC production could fall further, simply because the old marketing strategies are not sensitive enough to the rapid movements of the market.

In summary, in the absence of a new OPEC agreement to restrict production and prop up prices, prices will remain low because the demand and supply balance will not permit OPEC to achieve its desired market share. Continued attempts to produce in excess of market demand will keep pressure on market prices.

## Possible Price Paths

At this juncture, there are two plausible paths for oil markets to follow. The first is that OPEC, with some degree of tacit support from non-OPEC producing countries, reaches a new production sharing accord which results in prices above where they are today, but below where they were in 1985. A possible support level might be in the low twenty

dollars per barrel range. As a reference point, the 1975-78 price level of $12.70 per barrel, corrected for inflation to early 1986, would correspond to a price above $20 per barrel today.

We wouldn't expect prices to rise much above this level, because at least one apparent goal of the current OPEC strategy is to price its oil low enough to regain some of its markets -- both in competition with other fuels and with higher cost oil suppliers. At the same time it should be recognized that the price war reduces annual OPEC revenues by $5 billion for every $1 decline in oil prices (minimum 1986 OPEC exports are expected to be about 14 million barrels per day). The fact that OPEC can also increase its revenues by $5 billion per year for every $1 per barrel increase in oil price gives them a tremendous incentive to reach a new production sharing accord of some sort.

However, it is far from certain that any such political agreement among the producing countries would result in stable oil markets for any extended period. The history of past attempts by OPEC to establish production quotas suggests that any such agreement would be fragile and subject to the continuing tests of the marketplace.

The second, and increasingly likely possibility, is that OPEC will be unable to reach any agreement, that it will pursue its goal of increased market share, and that market forces will prevail. In this case, prices could remain in the $10-15 per barrel range for an extended period.

In the protracted price war that this second alternative implies, OPEC producers with their large reserves of relatively low cost oil, are going to be able to hold out longer than non-OPEC producers, who will gradually be forced to reduce their highest cost oil production to make room for the additional OPEC production.

It is hard to argue with the proposition that, at least in the short term, lower oil and, by implication, other energy prices are going to be beneficial to consumers and to the economy. Lower prices should help control inflation, reduce interest rates and stimulate economic activity, employment and personal income. However, we should not ignore the potential longer term impacts associated with this scenario.

## Analysis

What is the prognosis under each of these two possible cases? Even if OPEC is able to reestablish control over production (with or without the help of some non-OPEC producer country governments), the new equilibrium may not be stable. Our forecast of supply and demand indicates that the demand for OPEC oil is likely to remain below 20 million barrels per day for an extended period (Chart II, OPEC Crude Oil Production). With production at less than 70% of OPEC's long-term capacity, the market pressures experienced over the past several years which culminated in the present situation, are likely to persist.

Most of our previous analytical work has been done under the assumption of a moderate price decline to about $25 per barrel. Even under this assumption, we have for some time been forecasting that the U.S. will grow to be about 50% dependent on oil imports by the end of the century. At lower prices, the dependence will undoubtedly be higher (Chart VI, U.S. Oil Supply and Imports). For instance, at $15 per barrel, imports could be 1½ to 2 million barrels per day higher in the next two or three years than previously forecast. Even under the best of circumstances, most oil industry analysts expect that the industry will be unable to maintain current domestic oil production levels much longer. As the nation becomes increasingly dependent on oil from new domestic discoveries to replace current, declining production, it is important that the oil industry be assured ongoing access on reasonable terms to lands, both on- and off-shore, with attractive oil potential.

With growing import dependence, it is also essential that the U.S. follow policies designed to encourage and promote international trade. Trade is a two-way street and, since our continued dependence on oil imports is inevitable, we need to work to establish a climate in which trade and cooperation are not discouraged. U.S. restrictions on trade could well lead to retaliation, to the overall detriment of the world community.

As we move away from the moderate price decline case toward the lower prices that might result from an extended price war, the crystal ball becomes even cloudier. Just as analysts had little data to suggest just how producers and consumers would react to the price increases of the 1970's, today we have little evidence on which to base our analysis of the potential impact of sharply lower oil prices. One thing seems clear -- that demand for oil is not readily reversible. Investments have been made in alternative energy supplies, more efficient combustion technology and conservation which are not going to be discarded just because the price falls temporarily.

Our current best estimate is that, if the price remains about where it is today, U.S. oil demand might increase by, perhaps, one million barrels per day over the next two or three years, about half due to recapture of residual fuel oil markets and about half due to the increased light products consumption associated with increased economic activity and personal income.

On the supply side, it is equally difficult to be precise. Our forecasts indicate that at best the U.S. can expect to embark on a slow production decline. The insidious part is that not only is the decline from existing wells cumulative, but the overall decline rate is also accelerated in the longer term as a result of reduced investment levels. Oil exploration is and always has been largely a function of the oil industry's cash flow from current operations. Lower prices lead to reduced cash flow and to reduced exploration and production expenditures. Oil that is not discovered today due to reduced budgets will not be available to moderate the growing import level in the 1990's.

On February 24, 1986, The Oil & Gas Journal estimated that "industry spending in the U.S. this year will total $33.78 billion, down 23.7% from last year's outlay and down 60% from the peak of $82.94 billion in 1981." Although some of the decline from 1981 to 1985 was cushioned by declining unit costs in exploration and development, it is not clear how much further drilling costs can fall in response to declines in demand for contractor services.

A significant portion -- perhaps one-third -- of the remaining U.S. oil resource lies in the Federal Outer Continental Shelf (OCS). Although the USGS has recently reduced its estimates of Alaskan offshore potential, the chance for significant new oil discoveries remains highest off our coastlines.

The evaluation and development of these potential resources will be costly and require long lead times because of their offshore location and because of the environmental protection required. Therefore, the recent price decreases are of particular concern to an industry actively engaged in offshore development.

The long lead time also means that we cannot wait for the next crisis to begin development of the offshore. The Interior Department should continue, in a deliberate manner, to provide the opportunity to evaluate and develop these important natural resources.

## Conclusions

- We remain absolutely convinced that the restructuring that the industry has experienced over the past several years was essential, particularly in light of these new price developments. Because the oil industry is leaner and more efficient today, it is going to be able to weather this difficult period more effectively than it would have just a few years ago.

- However, we must be realistic about the prospects for the industry. At best, we are going to be in for an extended period of low prices, reduced earnings and curtailed capital and exploratory programs.

- It follows that this is not the time to increase the tax burden on the oil industry. Although deficit reduction and tax reform are critical items on the national agenda, the oil industry is not a "cash cow" which can be called upon to bear a disproportionate share of the burden. In view of the difficult times facing the industry, retention of capital formation incentives and a more general sharing of the superfund tax are called for rather than tax increases.

- It is obvious that the situation is volatile, subject to rapid change, and largely unpredictable. We suggest that both government and industry remain flexible and keep their options open in the event the situation goes from bad to worse. We anticipate the need for continued analysis and dialogue on these critical issues.

# Spot Crude Oil Prices

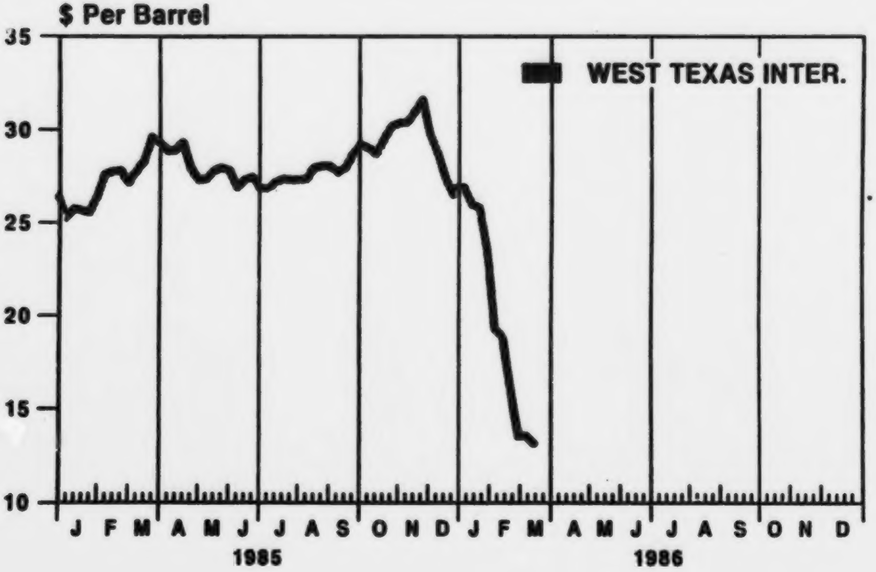


CHART I

Chevron

# OPEC Crude Oil Production

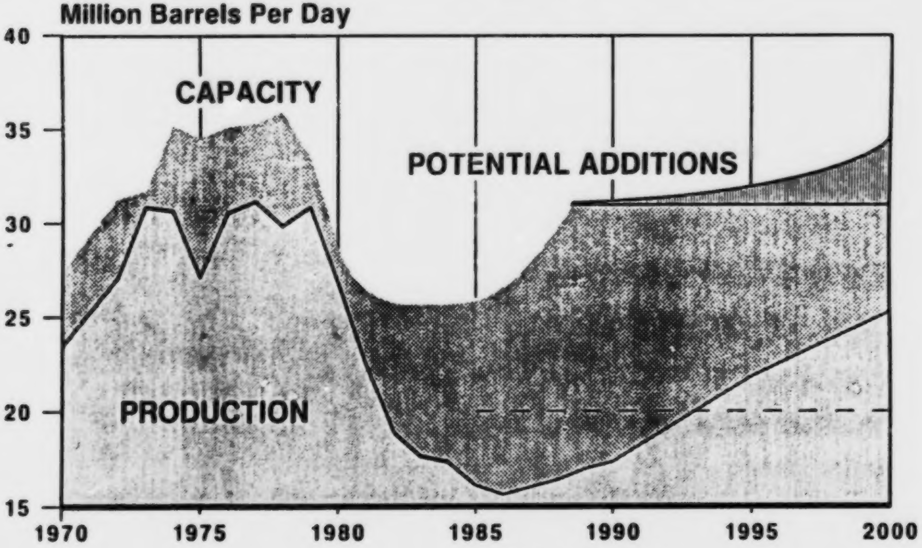


CHART II

60-978 O-86--7

# Petroleum Consumption
## Non-Communist World
### Million Barrels Per Day

| | 1984 | 1985 | 1986 |
|---|---|---|---|
| United States | 15.7 | 15.6 | 15.7 |
| Western Europe | 11.7 | 11.4 | 11.3 |
| Japan | 4.7 | 4.4 | 4.4 |
| Remaining OECD | 2.2 | 2.3 | 2.3 |
| Other | 12.3 | 12.3 | 12.4 |
| Total | 46.6 | 46.0 | 46.1 |

CHART III

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# Decline in Oil Demand

## Million Barrels Per Day

|  | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | Δ<br>1979-85 |
|---|---|---|---|---|---|---|---|---|
| Non-Communist World Demand | 52.7 | 49.7 | 47.6 | 46.1 | 45.9 | 46.6 | 46.0 |  |
|  |  | Annual Change in Product Demand |  |  |  |  |  |  |
| - Heavy Products | 12.6 | (0.9) | (1.3) | (1.0) | (0.9) | (0.4) | (0.9) | (5.4) |
| - Light Products | 29.0 | (1.3) | (0.2) | (0.2) | 0.2 | 0.8 | 0.2 | (0.5) |
| - Other | 11.1 | (0.8) | (0.6) | (0.3) | 0.5 | 0.3 | 0.1 | (0.8) |
| Total | 52.7 | (3.0) | (2.1) | (1.5) | (0.2) | 0.7 | (0.6) | (6.7) |

CHART IV

# Non-OPEC Supply

## Million Barrels Per Day

| | | | | Expected 1986** | |
|---|---|---|---|---|---|
| | 1983 | 1984 | 1985 | Old Oct. '85 | Revised Feb. '86 |
| North Sea | 3.0 | 3.3 | 3.4 | 3.5 | 3.4 |
| Mexico | 2.7 | 2.8 | 2.7 | 2.8 | 2.6 |
| Canada | 1.2 | 1.3 | 1.3 | 1.4 | 1.3 |
| United States | 8.7 | 8.9 | 8.9 | 8.9 | 8.8 |
| NGL | 2.6 | 2.7 | 2.8 | 2.8 | 2.8 |
| Net Exports Communist Countries | 1.9 | 2.0 | 1.7 | 1.7 | 1.6 |
| Other* | 6.0 | 6.7 | 7.2 | 7.5 | 7.3 |
| Total | 26.1 | 27.7 | 28.0 | 28.6 | 27.8 |

* Includes other crudes, synthetics, and net refinery gain

** Before and after initial price declines

CHART V

# U.S. Oil Supply and Imports

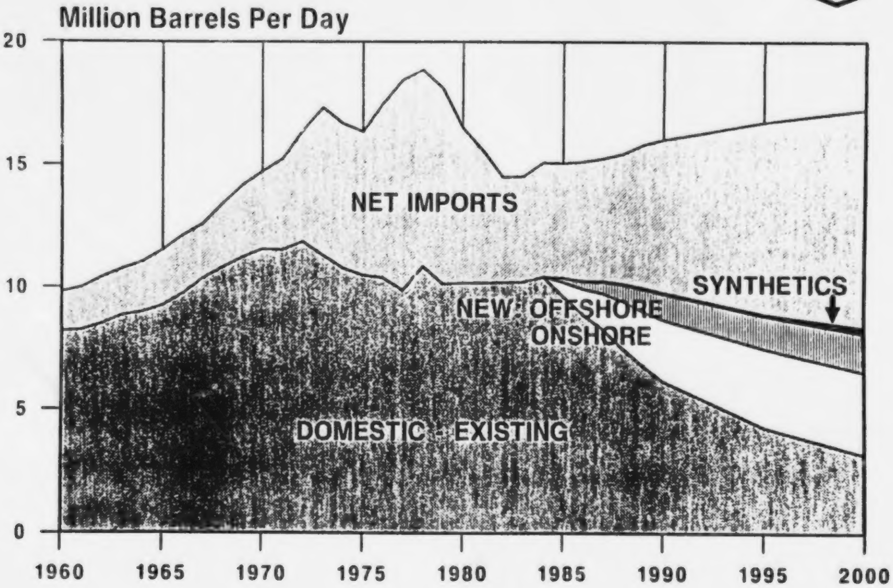


CHART VI

The **Chairman**. Thank you very much.
Mr. Hefner.

## STATEMENT OF RAYMOND H. HEFNER, JR., CHAIRMAN, INDEPENDENT PETROLEUM ASSOCIATION OF AMERICA

Mr. **Hefner**. Thank you, Mr. Chairman.

I am Raymond Hefner, chairman of the Bonray Energy Corp., an independent oil and gas producer from Oklahoma City. I also serve as chairman of the Independent Petroleum Association of America.

Our members generally only have one profit center: the sale of oil and gas at the wellhead. They also have only one prinicipal activity for reinvestment of their income: exploration and development of new petroleum reserves. They do not refine, market, or transport oil and natural gas.

It has become obvious that we are not soon going to replace oil and natural gas as our primary sources of energy.

Crude oil and natural gas which now provide almost 70 percent of our total energy will be our primary energy sources well into the next century. We have two choices. Either we can develop our own substantial domestic reserves or we can depend on imports to place ourselves exactly in the posture we held at the time of the 1979 shortage.

Our industry is now in the fifth year of a devastating economic shakedown. Since 1982, literally thousands of economic entities have been liquidated, including independent producers, drilling contractors, supply and equipment firms and financial institutions. The end is nowhere to be seen.

Now, under the threat of wholesale revision of historic energy tax provisions, accompanied by precipitous declines in oil prices, many in the industry find that their production cost, overhead, taxes and debt retirement require far more dollars than they are able to generate internally.

Outside investment has stopped altogether. I call your attention to the chart "Rotary Rigs Active," following page 3 of our written testimony. As of this week, our active rotary rig count is 1,212, only 27 percent as many rigs as were operating in December 1981 and only 20 percent above the average of the worst year ever recorded.

Unless this collapse in essential drilling activity is somehow reversed, an irreversible decline in domestic petroleum production will soon be evidenced. At current levels of industry activity, by 1990 our import dependence could almost double to 60 percent of our requirements. This is a higher number than you have heard earlier.

If this occurs, we will again be at the mercy of OPEC both as to supplies and as to prices of essential energy. The Nation is faced with the prospect of such a calamitous decline in current production as well as exploration and drilling activity for future production, but there is already a significant threat to national security.

Recently, the Interstate Oil Compact Commission estimated that at $15 a barrel, as many as 100,000 stripper wells would be shut in within a year. In addition, many marginal wells not in the stripper categories, will also be prematurely abandoned. If this happens, our production could fall by as much as 1 million barrels per day within 1 year.

Drilling contractors are under very severe strain. Most are now operating close to the breakeven point or at a loss. Further reductions in costs are almost impossible. Other service industries are also shutting their doors and thousands of jobs are being lost.

Just as importantly, much of the expertise needed to find and produce oil and gas is being lost. These facts, I believe, demonstrate clearly that first, if we are going to avoid growing energy vulnerability, our present level of drilling activity must be increased very significantly.

Second, the domestic petroleum industry is an economic basket case with exploration and development programs in a state of collapse.

Third, national interests will be ill-served unless we can reverse current trends and restore exploration, drilling and development activity to an adequate level.

Government has contributed to this situation by its past actions and continuous threats of negative action. The Government has to be concered about conditions threatening both our short-term and our long-term energy producing capability.

We are already confronted with a certainty that tens of thousands of marginal wells will be prematurely plugged and abandoned this year because of the precipitous drop in oil prices. Each barrel of lost daily production will have to replaced by a barrel of imported oil.

Hundreds of millions of barrels of potential future reserves will be lost forever. To hold that loss to a minimum and to avoid increasing the power of OPEC, we urge the following:

One, Assure continued expensing of intangible drilling costs and include geological and geophysical costs as intangibles;

Two, Restore percentage depletion for all domestic production and repeal the unnecessary limitations on depletion, including restrictions on transfers of producing properties;

Three, Remove natural gas price controls;

Four, Eliminate restrictions on the use and transportation of natural gas;

Five, Revise the banking regulations that are forcing banks to unnecessary foreclose on struggling producers; and

Six, Refund to producers now operating marginal properties at a loss some of the $77 billion the Government denied producers through the windfall tax when oil prices were rising.

These are just the most urgent of an extensive list of changes Congress can make to help avoid the total collapse of the domestic exploration and production industry.

Thank you.

[The prepared statement of Mr. Hefner follows:]

# INDEPENDENT PETROLEUM ASSOCIATION OF AMERICA

AND

AMERICAN ASSOCIATION OF PETROLEUM LANDMEN
ARKANSAS ROYALTY MEMBERSHIP
CALIFORNIA INDEPENDENT PRODUCERS ASSOCIATION
COASTAL OIL AND GAS ASSOCIATION
EASTERN KANSAS OIL AND GAS ASSOCIATION, INC.
EAST TEXAS PRODUCERS AND ROYALTY OWNERS ASSOCIATION
ENERGY CONSUMERS AND PRODUCERS ASSOCIATION
GEORGIA OIL AND GAS ASSOCIATION
ILLINOIS OIL AND GAS ASSOCIATION
INDEPENDENT OIL AND GAS ASSOCIATION OF NEW YORK
INDEPENDENT OIL AND GAS ASSOCIATION OF WEST VIRGINIA
INDEPENDENT OIL PRODUCERS TRI-STATE, INC.
INDEPENDENT PETROLEUM ASSOCIATION OF MOUNTAIN STATES
INDEPENDENT PETROLEUM ASSOCIATION OF NEW MEXICO
INDIANA OIL AND GAS ASSOCIATION
KENTUCKY OIL AND GAS ASSOCIATION
LIAISON COMMITTEE OF COOPERATING OIL AND GAS ASSOCIATIONS
LOUISIANA LANDOWNERS ASSOCIATION INC.
LOUISIANA ASSOCIATION OF INDEPENDENT PRODUCERS AND ROYALTY OWNERS
MICHIGAN OIL AND GAS ASSOCIATION
NATIONAL STRIPPER WELL ASSOCIATION
NEW YORK STATE OIL PRODUCERS ASSOCIATION
NORTH TEXAS OIL AND GAS ASSOCIATION
OHIO OIL AND GAS ASSOCIATION
OKLAHOMA INDEPENDENT PETROLEUM ASSOCIATION
ORANGE COUNTY PETROLEUM ASSOCIATION
PANHANDLE PRODUCERS AND ROYALTY OWNERS ASSOCIATION
PENNSYLVANIA GRADE CRUDE OIL ASSOCIATION
PENNSYLVANIA NATURAL GAS ASSOCIATES
PENNSYLVANIA OIL AND GAS ASSOCIATION
PERMIAN BASIN PETROLEUM ASSOCIATION
ROCKY MOUNTAIN OIL AND GAS ASSOCIATION
ROYALTY OWNERS AND INDEPENDENT OIL AND GAS PRODUCERS ASSOCIATION OF ARKANSAS
TENNESSEE OIL AND GAS ASSOCIATION
TEXAS INDEPENDENT PRODUCERS AND ROYALTY OWNERS ASSOCIATION
VIRGINIA OIL AND GAS ASSOCIATION
WEST CENTRAL TEXAS OIL AND GAS ASSOCIATION

before the

UNITED STATES SENATE

COMMITTEE ON ENERGY AND NATURAL RESOURCES

Hearings on Petroleum Industry Issues

March 14, 1986

U.S. SENATE
COMMITTEE ON ENERGY AND NATURAL RESOURCES
Hearing on Petroleum Industry Issues
March 14, 1986

I am Raymond H. Hefner, Jr., Chairman of Bonray Energy Corporation, an independent oil and gas producer in Oklahoma City. I am appearing here as Chairman of the Independent Petroleum Association of America. Together with thirty-seven unaffiliated state and regional associations listed on the cover page which join us in these comments, we represent essentially all of 12,000 independent oil and gas producers (and thousands of royalty owners) who account for 90 percent of all the wildcat drilling in the United States and 85 percent of all drilling, which results in finding a majority of the significant oil and gas discoveries. Our members generally have only one profit center -- the sale of oil and gas at the wellhead. They also have only one principle activity for reinvestment of their income -- exploration and development of new petroleum reserves. They do not refine, market or transport oil and natural gas.

## INTRODUCTION

In 1973, when we were all standing in gasoline lines, there was a great hew and cry from Congress, the Administration and the American public to do something about our energy problem. At that time, it was decided that we would make the transition away from conventional fuels to alternatives, renewables, and exotic forms of energy. Conventional oil and gas would merely serve as a stop gap measure for a relatively short interim. It has since become obvious that we are not, any time in the reasonably near future, going to transition away from oil and natural gas as our primary sources of energy. Nuclear power has been stymied. The synfuels industry has collapsed. Development of coal is lagging due to transportation and environmental concerns. It is inescapable that crude oil and natural gas, which now provide almost 70% of our total energy, will be our primary energy sources well into the next century.

We have two choices. Either we can develop our very significant remaining reserves of crude oil and natural gas within the United States, or we can become dangerously overdependent on imported oil and place ourselves exactly in the posture we held at the time of the 1979 oil disruption. We have adequate reserves of oil and gas. What we don't have is the economic and regulatory framework necessary to develop those reserves. And it can't be done for nickles and dimes. It is going to require the commitment of unprecedented massive amounts of capital that will be invested only if Congress acts now to make the necessary changes in tax and regulatory provisions required to encourage people to invest in one of the most necessary, but still high risk, capital ventures an investor can undertake.

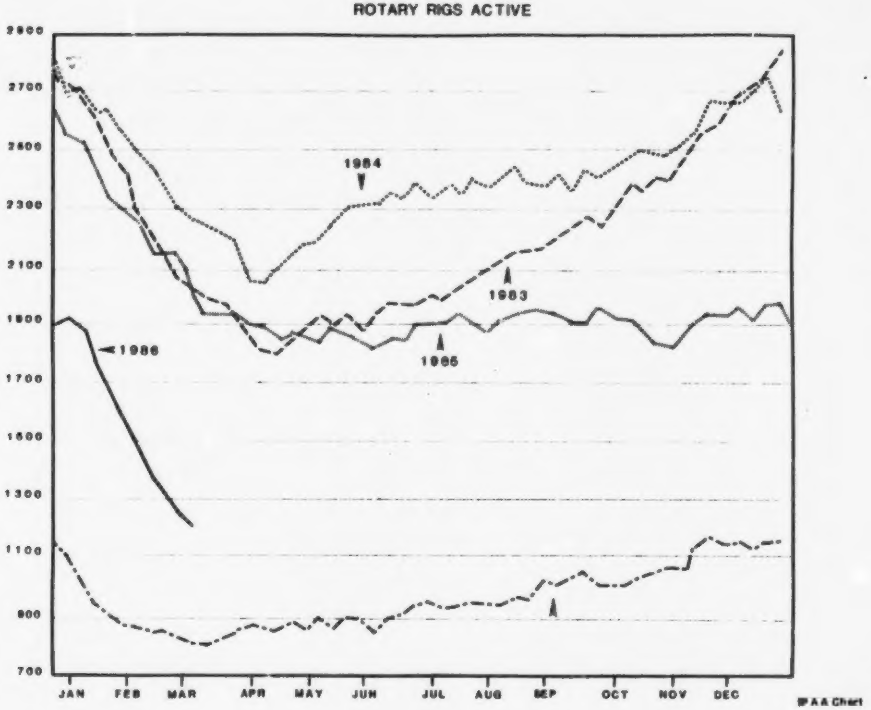
Our industry is now in the fifth year of a devastating economic shakeout. Since 1982, literally thousands of economic entities have been liquidated, including independent producers, drilling contractors, supply and equipment firms, and financial institutions. The principal oil producing states, whose government revenues are largely dependent on oil and gas prices and taxes, are confronted with monumental revenue shortfalls. And the end is nowhere to be seen.

Petroleum exploration and development always has been cyclical, but nothing in previous experience prepared us for the wild economic gyrations of recent years. In the up-cycle from the mid-1970s through 1981, the industry expanded its activities at unprecedented costs covered by equally unprecedented debt obligations. Now, under threat of wholesale revision of historic energy tax provisions accompanied by precipitous declines in oil prices, many in the industry find their production costs, overhead, taxes and debt retirement requiring far more dollars than they are able to generate internally. Outside investment has stopped altogether.

As a result, we are witnessing the most dramatic and sustained "free fall" in domestic petroleum exploration and development in the entire history of the industry. The uncertainty created by pending tax legislation has been a principal contributing factor; it is not just coincidental that we are now operating just half as many drilling rigs as were running in December 1984, just after the Administration put forth its so-called "Treasury I" proposal which punitively would have eliminated all energy tax provisions imbedded in the economic fabric of our industry.

The chart, Rotary Rigs Active, shows our rig count as of March 10 at 1,212, only 27% as many rigs as were operating on December 31, 1981. Unless this collapse in essential drilling activity is somehow reversed, a perhaps irreversible decline in domestic petroleum production will soon be evident. At current levels of industry activity, our import dependence could almost double by 1991, from about 35% to some 60% of our requirements. If this occurs, we will again be at the mercy of OPEC both as to supplies and prices of essential energy.

Even before the collapse in crude oil prices over the past 60 days this industry was in economic difficulty. Now, our industry and the nation is faced with the prospect of such a calamitous decline in current production and the exploration and drilling activity necessary to maintain future production that there is already a significant threat to national security. Let me give you some details.


ROTARY RIGS ACTIVE
2900
2700
2500
2300
2100
1900
1700
1500
1300
1100
900
700
1984
1983
1985
1986
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
IPAA Chart

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## Hughes Rotary Rig Count

1985-1986

| | Week # | 1985 | 1986 |
|---|---|---|---|
| | 1 | 2,576 | 1,915 |
| January | 2 | 2,556 | 1,880 |
| | 3 | 2,453 | 1,773 |
| | 4 | 2,370 | 1,671 |
| | 5 | 2,303 | 1,594 |
| February | 6 | 2,271 | 1,496 |
| | 7 | 2,175 | 1,376 |
| | 8 | 2,162 | 1,308 |
| | 9 | 2,143 | 1,248 |
| March | 10 | 2,011 | 1,212 |
| | 11 | 1,934 | |
| | 12 | 1,937 | |
| | 13 | 1,939 | |
| | 14 | [illegible],910 | |
| April | 15 | 1,898 | |
| | 16 | 1,860 | |
| | 17 | 1,862 | |
| | 18 | 1,855 | |
| May | 19 | 1,841 | |
| | 20 | 1,901 | |
| | 21 | 1,869 | |
| | 22 | 1,848 | |
| | 23 | 1,821 | |
| June | 24 | 1,851 | |
| | 25 | 1,854 | |
| | 26 | 1,907 | |

1971
(Lowest Recorded Year)

| | Week # | 1985 | 1986 |
|---|---|---|---|
| | 27 | 1,904 | |
| July | 28 | 1,910 | |
| | 29 | 1,931 | |
| | 30 | 1,908 | |
| | 31 | 1,890 | |
| | 32 | 1,911 | |
| August | 33 | 1,928 | |
| | 34 | 1,945 | |
| | 35 | 1,940 | |
| | 36 | 1,932 | |
| September | 37 | 1,917 | |
| | 38 | 1,912 | |
| | 39 | 1,955 | |
| | 40 | 1,935 | |
| | 41 | 1,934 | |
| October | 42 | 1,906 | |
| | 43 | 1,839 | |
| | 44 | 1,838 | |
| | 45 | 1,864 | |
| November | 46 | 1,895 | |
| | 47 | 1,942 | |
| | 48 | 1,946 | |
| | 49 | 1,962 | |
| December | 50 | 1,911 | |
| | 51 | 1,983 | |
| | 52 | 1,995 | |
| | 53 | 1,898 | |

Note: The monthly designations apply to 1986 data only.

IPAA

## SHORT TERM IMPLICATIONS

A massive drilling effort in the period 1973-1981 reversed the decline in U.S. petroleum production. This reduced our dependence on imported petroleum from 46 percent in 1977 to 30 percent in 1985. Now that situation is being reversed, with domestic production declining and imports increasing.

The short term production decline is directly related to reduced cash flow caused by rapidly declining crude oil prices and negative tax treatment of producers. The drop in production could reach 1,000,000 barrels per day within a year. Additional production declines will result in the future due to failure to drill new wells to replace the normal 10 percent per year production decline in wells still in production.

A producer can operate a well until it doesn't yield any cash flow, i.e., the current operating costs equal the current revenue from the sale of crude oil. If the producer has a reasonable expectation that within a short time -- two or three months -- revenues will increase or costs can be reduced, production may be continued at a loss. However, most producers, and especially smaller independents, are so hard pressed for cash flow that there is almost no leeway for making the decision to cease production. Once this occurs, it is very unlikely production will ever be resumed.

Most oil and gas leases provide that if production from a property ceases for sixty days (other than for normal maintainance or a "workover" of a well) the lease is automatically terminated. Also, most states have regulations that require a well to be physically "plugged" by injection of cement into the well bore under stringent environmental protection procedures, usually within 90 days after production is halted. The relatively low volume of production and remaining reserves make the cost of drilling a new well prohibitive unless the price increases several fold.

The National Stripper Well Association and Interstate Oil Compact Commission estimate that 100,000 stripper wells will be shut in within a year. There are an estimated 465,000 wells in the stripper class, 72 percent of all producing wells. In 1985, these wells produced an average of 2.74 barrels of oil totalling 1.3 million barrels per day, or about 15 percent of all the oil in the U.S. or 17% of the oil produced in the Lower 48. Majors and independents each produce about half of the stripper oil but the larger companies must have higher volume wells to be economic. It is estimated that independents operate 331,000 of the stripper wells, more than 71 percent. If 100,000 of the stripper wells are sut in, 270,000 barrels per day of total production will be lost.

However, wells not in the stripper class will also be plugged. Excluding both North Slope wells and stripper wells average production is 33.4 barrels per well per day. A certain number are high volume producers. If 25,000 of those wells average 100 barrels per day, then the remaining 15,600 average about 22.7 barrels per day. If 10 percent of the latter wells are shut in, then an additional 355,000 barrels per day of production will be lost.

Total lost production would be about 630,000 barrels per day.

In addition to this lost production, the remaining production will have a normal decline of about 10 percent.

If we complete 19,000 new oil wells each adding an average production of 20 barrels per day, about 400 barrels per day will be added. Balancing the lost production with new production indicates that daily production could fall as much as one million barrels within one year.

Drilling contractors will be under severe strain. Most are operating close to a cash break even point and further reductions in cost are almost impossible. If the contractor has debt against the rigs, he will probably go under. Others will go out of the business by "mothballing."

Other service companies will just shut their doors or streamline their already streamlined operations with an attendant loss of jobs.

It is estimated that with each $1 per barrel drop in oil prices, 25,000 jobs are lost due to decreased petroleum industry activity.

Many banks will be hard pressed to avoid problems. Although a great many reworked their loan portfolios over the last several years and made new loans based on $15 oil on 50 percent of the estimated reserves, these limits have been reached. If the bank had not restructured in that fashion, it may already be in a problem position. A problem the banks have is the state or federal regulatory agencies pushing them to impossible positions, given the circumstances, in the guise of protecting the depositors when in fact the opposite tactic might be more beneficial.

From a total expenditure for exploration and development of $56.475 billion in 1981, the industry probably spent about $35 billion in 1985. A drop to $20-25 billion could occur in 1986. If the rotary rig count averages 1,200 for the year at a rate of 38 wells per rig (highly unlikely), 45,000 wells could be drilled compared to 76,000 in 1985. The long-term implications are frightening.

## LONG RANGE IMPLICATIONS

One of the constants in the history of the oil industry has been its consistent record of being sold short, by persons in and out of the political community. Domestic crude oil production peaked at 9.6 million barrels daily in 1970 then declined over a six year period to 8.1 million barrels daily, a loss of 1.5 million barrels daily. There were few who predicted that this decline could have been arrested and even increased somewhat in the past five years. Chart 2 compares actual production with the trend line of the 1970-77 experience. The stabilization of domestic production was achieved by extraordinary efforts by independent producers, involving the drilling of

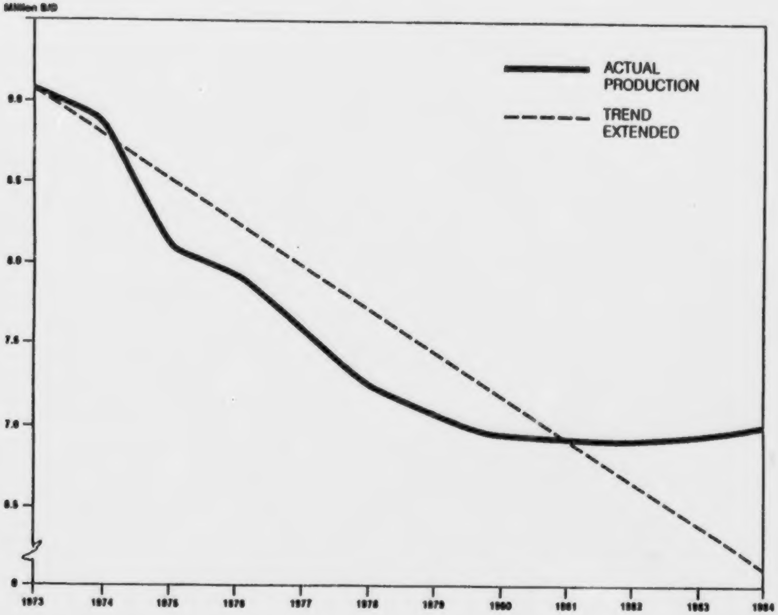
202,652 new oil and gas wells in the six years ending in 1984 -- 155 percent more than was drilled in the six years following the peak production year of 1970. But this 166 percent gain in drilling was achieved at a cost of $299 billion -- an increase of 419 percent over the 1970-76 period.

While these extraordinary efforts halted the production decline, few recognize the significance of this in terms of balance of payments savings, and of helping to reduce OPEC's control over both markets and prices. Except for this increased oil drilling, U.S. production would have been 1.3 million barrels per day less in 1984, and our additional costs for imported oil would have been almost $15 billion greater.

The dominant force in not only stabilizing production, but in raising the daily output by about 300,000 barrels since 1979, is attributable to the multiplicity of efforts by independent producers. In this same period, the combined lower 48 production by the 25 or so larger companies identified as the "Chase Bank Group," actually has declined by 300,000 barrels daily. In arresting the production decline, independents have offset this production drop experienced by the major companies. As a result, the share of lower 48 production by independents has increased from 29 percent 10 years ago to about 40 percent today.

## RESPONSE TO DRILLING EFFORT

Crude Oil Production

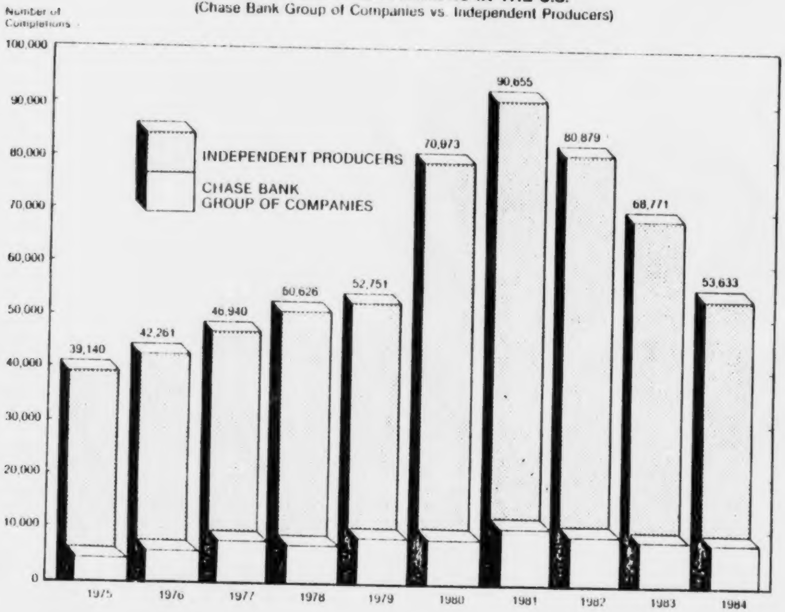


Source: DOE/EIA (Data for lower 48 states)

IPAA Chart 2

Chart 3 shows the dominant role of independents in domestic exploration/development. They have accounted for 87.3 percent of total well completions in the past 10 years; or 550,185 wells out of 629,825 drilled. In the past 15 years, the U.S. has found as much oil as it produced in only one year, 1981. As can be seen, total drilling as reported to date has dropped sharply in the past three years, with 56,633 total wells reported for 1984 representing only 62 percent of the 1981 well completions.

## CHART 3
## TOTAL WELL COMPLETIONS IN THE U.S.
(Chase Bank Group of Companies vs. Independent Producers)



*Source: Petroleum Information, Inc.*

IPAA CHART
MARCH 1985

9.7

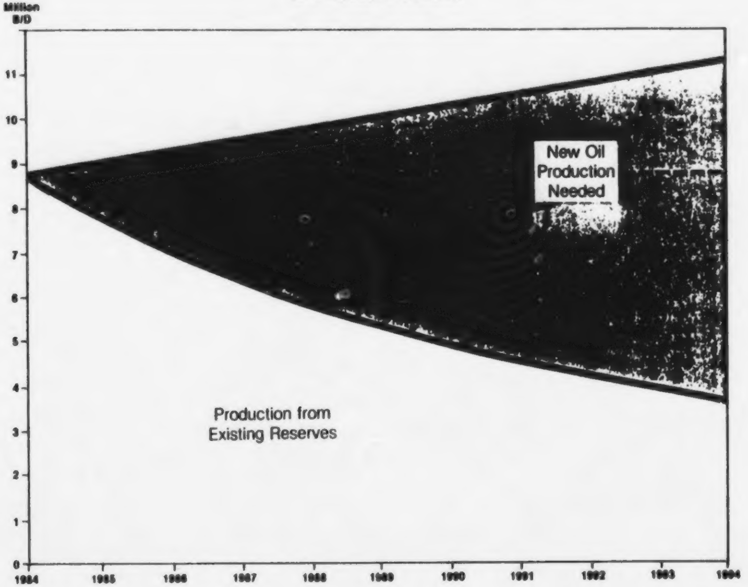
Energy vulnerability means different things to different people. Some view the question only in terms of military security. Our nation has never had a fuel problem in a military emergency, however. While adequate energy supplies are important to military security, they are equally important for the transportation, employment and economic security of the American people. We learned this lesson in the 1970s during imposed shortages of petroleum liquids, as well as artificial natural gas shortages which resulted in plant and office closings and unscheduled, unpaid "vacations" for Americans in many sections of the country. We should not forget these experiences, and it should be national policy to minimize the chance that they will occur again.

If the nation is to have relative energy security, which I would define as the ability to cope with significant import supply disruptions with no substantial or lasting impairment of economic activity, there is no question that current exploration/development drilling will have to be significantly increased. Chart 4 projects the production which must be found and developed if we are to contain import dependence at the current level of about 30 percent of domestic demand. (This projection assumes an increase in demand of only two percent in the period 1985-94, which is below the growth we are experiencing currently. The World Bank estimates that a 25 percent drop in petroleum prices below $25 per barrel will increase demand 5 percent over two years and 10 percent within five years. Prices have already declined at least 40% below $25.)

As can be seen, domestic production will have to be increased by 11.4 million barrels daily by 1994. Because of the natural production decline from existing wells, this means 13 million barrels of new daily production will be required in this period.

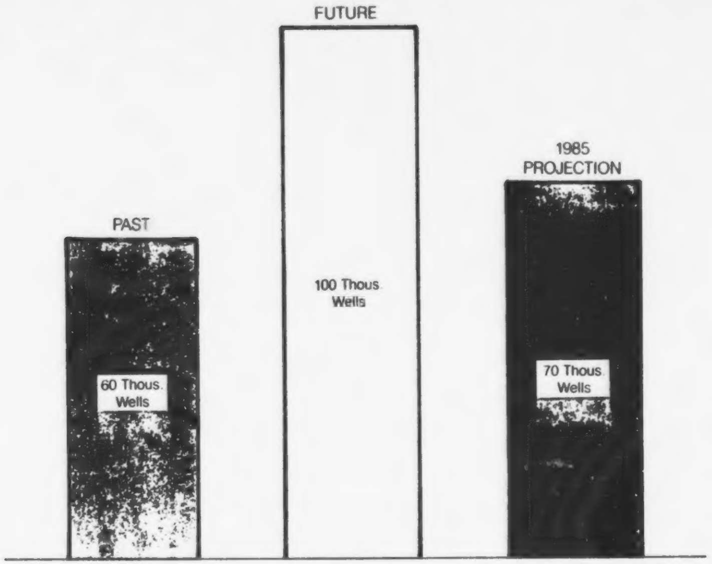
## NEW CRUDE OIL PRODUCTION NEEDED

(2% Increase in Demand)



IPAA Chart 4
June 1985

Now, let us look at the drilling requirements to achieve this essential growth. Charts 5 and 6 illustrate that to meet 70 percent of domestic demand for petroleum liquids from domestic resources in the coming decade, the industry will be required to spend $620 billion and drill a total of 1,000,000 new wells. Maintaining relative energy security, in other words, will require a commitment of unprecedented capital resources to drill unprecedented numbers of wells.

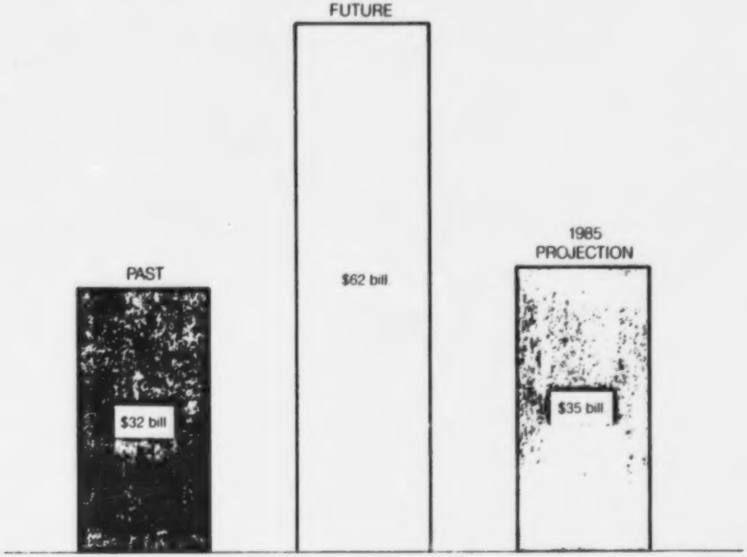


**DRILLING REQUIREMENTS**
10 Year Average

Source API, IPAA

IPAA Chart 5
June 1985

**EXPENDITURE REQUIREMENTS**
10 Year Average



Source: Chase Manhattan Bank, IPAA

IPAA Chart 6
June 1985

How does the activity level of the industry stack up against these requirements?

Just since mid-December 1984, the number of rotary rigs at work has dropped by 1,575 units or 56.5 percent. As of today, 63 percent of the industry's operable rotary rig fleet is idle. These facts clearly illustrate that while the economy as a whole is in its third year of recovery, the petroleum exploration/producing industry remains in a downcycle that shows no signs of abating. Recent experiences of the domestic industry have been marked by numerous sales, mergers and bankrupticies, continued difficulties in a number of oil country banks and extreme financial difficulties among a multiplicity of long-established organizations providing equipment, supplies and services to the industry.

The preceding facts, I believe, demonstrate clearly that (1) if we are to avoid growing energy vulnerability, our present level of drilling activity must be quadrupled, (2) the domestic petroleum industry virtually is an economic "basket case" with its exploration/development programs in a state of collapse and (3) the public and the national interests will be ill-served unless we can reverse current trends and restore exploration/drilling/development activity to adequate levels.

## CONCLUSION

Government has contributed to this situation by its past actions and threats of negative actions. Government has to be concerned about conditions threatening both our relatively short-term and long-term energy producing capability, and there are things that Government can and must do if our industry is to be effective and aid in our country's continued progress and economic well being.

We are already confronted with the certainty that tens of thousands of marginal or stripper wells will be plugged and abandoned this year because of the precipitous drop in oil prices. Each barrel of daily production lost will have to be replaced by a barrel of imported oil. Also, hundreds of millions of barrels of potential future reserves will be lost forever. To hold that loss to a minimum and avoid increasing the power of OPEC, we urge:

(1) Assure continued expensing of intangible drilling costs in the year expended or incurred and modify the definition to include geological and geophysical costs and unrecoverable surface casing.

(2) Restore percentage depletion for all domestic oil and gas production and repeal the 50 percent of net income and 65 percent of taxable income limitations and remove the restrictions on transfers of proven properties.

(3) Repeal the Windfall Profit Tax.

(4) Remove natural gas wellhead price controls.

(5) Eliminate restrictions on the use and transportation of natural gas.

(6) Revise certain rules of the FDIC, the Comptroller of the Currency and the Federal Reserve Board that detrimentally affect the oil and gas industry.

(7) Immediate adoption of a marginal well Production Maintenance provision to assure continuation, until the market stabilizes, of production from properties which otherwise would be absndoned.

(8) Ease certain environmental restrictions related to underground injection control (UIC) and speed efforts by EPA for approval of state UIC programs.

These are just the most urgent of an extensive list of positive changes Congress can make to help avoid the total collapse of the domestic petroleum exploration and production industry as we know it today. A more complete list is attached as an exhibit.

Thank you.

## IPAA ENERGY/ACTION RECOMMENDATIONS

### A. TAX ISSUES

For Maintenance of Existing Production:

- Restore percentage depletion for all production at 27 1/2%, and
  - Repeal 50% of net income per property limitation
  - Repeal the proven property transfer rules
  - Repeal the 65% of taxable income limitation per taxpayer
- Repeal windfall profit tax: until then, repeal WPT proven property transfer limitations
- Ensure that the "once a stripper, always a stripper" rule is kept intact
- Repeal IDC recapture rules or revise to delete reference to percentage depletion in calculation of recapture offset
- Adopt a marginal well production provision to prevent the premature plugging and abandoning of wells currently operating below the breakeven point

To Encourage New Exploration and Development:

- Retain full deductibility of IDC and percentage depletion for all producers
- Retain ACRS depreciation and the Investment Tax Credit
- Treat geological and geophysical costs and unrecoverable surface casing as IDC
- Provide an Exploratory Tax Credit of 15% of expenditures for exploration activity
- Remove restrictions on the deductibility of IDC payments made pursuant to carried interest arrangements
- Extend the 90-day economic performance rule for prepaid IDC when state frost laws apply
- Revise the economic performance rules to permit accrual basis taxpayers a deduction for prepayments of IDC
- Repeal Revenue Ruling 77-176 concerning deemed income resulting from acreage earned outside of the drill site
- Repeal Revenue Ruling 83-46, which reverses a long standing IRS interpretation of the pool of capital doctrine
- Reinstate the at-risk aggregation rules for oil and gas properties

Alternative Minimum Tax:

- o Maintenance of the current law net income offset for excess IDC
- o Maintenance of the AMT rate at less than 50% of the regular tax rate
- o Codification of tax benefit principles which ensure that the percentage depletion deduction will not be permanently lost due to the AMT
- o Extend the provisions of H.R. 3838 regarding treatment of farmers under the AMT to insolvent oil and gas producers

B. REGULATORY ISSUES

Natural Gas Recommendations

- o Repeal the Fuel Use Act
- o Deregulate natural gas
- o Provide for the non-discriminatory carriage of natural gas

Banking Recommendations

- o Modify existing regulatory requirements as follows:
  - -- Lengthen the period banks can amortize energy loans and reschedule repayments
  - -- Modify legal "net worth" guidelines for energy lender banks

C. ENVIRONMENTAL ISSUES

- o Streamline the Underground Injection Control (UIC) program to:
  - -- Expedite EPA approval of state UIC programs
  - -- Expedite permit approvals in states with EPA run programs
  - -- Modify the UIC program substantive requirements such as mechanical integrity testing to include less costly alternatives

Public Land Recommendations

- o Retain the Simultaneous Oil and Gas Leasing System
- o Extend lease terms on existing onshore and offshore public lands
- o Discourage any land use restrictions such as additional unnecessary environmental requirements of land withdrawals
- o Maintain the currently scheduled offshore lease sales
- o Suspend the proposed BLM/FS land exchange

The Chairman. Thank you, Mr. Hefner.
Mr. Blum.

## STATEMENT OF JACK A. BLUM, GENERAL COUNSEL, INDEPENDENT GASOLINE MARKETERS COUNCIL

Mr. Blum. Mr. Chairman, thank you.

My name is Jack Blum. I am the general counsel of the Independent Gasoline Marketers Council, a trade association of nonbranded independent retailers and wholesalers of motor gasoline.

I would like to begin by saying we strongly favor a continued free market in petroleum. We think that the Government policy to date of non-intervention is a correct one and would strongly oppose an import fee, or any other attempt for that matter to try to stabilize domestic petroleum prices.

The view comes from a rather long experience with controls and attempts to stabilize, and the fact is that they are always counterproductive, have not worked, and have produced exactly the results that we as a country have tried to avoid.

If I had a single policy recommendation to make, and I will come back to the supporting ground, it would be to expand the Strategic Petroleum Reserve, perhaps purchase Mexican oil to fill the reserve to meet our foreign policy need, and perhaps begin to establish reserves for products in various strategic locations in the Northeast particularly.

Our view of the petroleum industry comes from this experience. We tried import protection for a period from 1957 to 1970 and the report that you, Mr. Chairman, were holding makes a very good case that the import restrictions did not work.

We can argue that what it did do was adopt a policy of drain America first. All our reserves, in fact all reserves of any mineral, can be seen as a continuum. That is, there is a resource available at a price. If you push that price high enough, more reserves will be found. If the price falls, certain reserves become nonproductive.

What we did for a long period from 1957 to 1970 was hold our price way over world markets and produce relatively expensive, by world standard reserves, here in the United States.

The situation we are in today is that our reserves are again very expensive by world standards. They look good because OPEC prices went over the costs by so much. I would like to just talk for a minute about how OPEC worked and what it did to us.

OPEC is a classic cartel that overreached. At $27 to $30 a barrel, everybody who could get their hands on a drilling rig drilled and everywhere they drilled, they found. We have finds of natural gas in areas where people thought there was no natural gas. We have finds of oil in in countries where people thought there was no oil. We heard discussion of Australia. In fact with seven drilling rigs in 1984, Venezuela added more than it produced in the course of the year, and it used seven rigs to do it.

The point is that as OPEC's prices went up, more and more oil was found because people were looking at the price that was being paid and saying we can produce it for far lower cost.

As a result, the only way OPEC could maintain itself was to gradually absorb every new barrel of production anybody put on the table, and that is what OPEC tried to do; only we reached a point with OPEC where they cannot do it anymore. Some countries could not cut back production because they have too many people and other countries could not cut back production because they would have to actually start buying oil to prop up the price.

In our view, this overreaching by the cartel has created a situation where it is apparent to everyone that at prices continuing over $20-some odd dollars a barrel, and I would say $21, what is going to happen is we will be in a flood of oil and more and more and more oil will continue to come to market. That has to drive the price down.

In every cyclical industry, pulp and paper, iron ore, you get the same kinds of cycles of up and down pricing. We would expect that over the next number of years, there are going to be cycles of up and down pricing in this industry, but they are better allowed to happen than to have Government jump in and to say we are going to hold the price line; we are going to keep the price at a certain level and we are going to help you.

Mr. Schlesinger, this morning I recall, came before this Committee and said we would be running out of liquid petroleum in the mid-80s; that what we had was a crisis that was so severe, we had to use public money to bridge it and we had to go forward in every way we knew how to add to the supply.

By the time that Administration was finished with its efforts to prop up price, to add incentives, and to do everything it could to bring new production on line, we had indeed tremendous overcapacity. Their results are now creating our problem.

We would have been much better off without that market intervention, that great push on the upside which now leads to the Great Depression on the downside.

I would like to turn for a minute to another issue which I think is very important and has not been addressed here at all today. I was asked by Senator Metzenbaum to address the question of why the benefits of lower oil prices have not necessarily passed through to the consumer at the pump.

The answer is in most parts of the country, in many parts of the country, it has passed through to the consumer. In some areas of the country, it has not. And it has not because we have lost a significant amount of competition through a series of mergers and buyouts and station swaps, and the analysis of the Federal Trade Commission at the time these mergers took place was, if we have competing gasoline stations, that is enough.

They used a measurement called the Herfindahl Index and that measurement was said to tell you that there would be reasonably competitive market. Therefore, there was no need for antitrust action.

I ask you to compare by way of analysis the retail prices of gasoline in States like Ohio which are considerably lower than they are in areas of the Northeast where the mergers took place, where the FTC did not act, and where what you have is essentially retail competition, but the supplier in the case of the retail competitor is the same supplier, so there is a minimal desire to get out there and bash the price down and get market share, because your supplier simply is not going to give you that much more product.

To reiterate, I feel that we must stay away from Government regulation of this market; that we would be much better off as a country trying to prepare for the emergency situation or the market failure. Futures markets will iron out these prices. Time will iron out these prices.

I am reminded that 3 months do not make a season in anything, and we have had 3 months of sharply lower prices. One ought to wait to see how the cycle plays out before acting precipitously.

Finally, when I looked at the list of people who get into trouble because of low prices, I am very sympathetic to the domestic producers, but I think if we solved some of their gas production problems with decontrol, we will go a long way to help them.

But then I look at some of the other people hurting: Iran, Libya, the Soviet Union, and I say to myself, "This can't all be bad."

Thank you, Mr. Chairman.

[The prepared statement of Mr. Blum follows:]

BEFORE THE

COMMITTEE ON ENERGY and NATURAL RESOURCES
United States Senate

On Behalf of

INDEPENDENT GASOLINE MARKETERS COUNCIL
1133 Fifteenth Street, N.W.
Washington, D.C. 20005

# WORLD ENERGY PRICES

Submitted By:
Jack A. Blum
Blum, Nash & Railsback
1133 Fifteenth Street, NW
Washington, D.C. 20005

March 14, 1986

My name is Jack A. Blum. I am the general counsel of the Independent Gasoline Marketers Council, a trade association of non-branded independent retailers and wholesalers of motor gasoline.

We very much appreciate the invitation to testify at the Committee's hearing on the recent developments in petroleum markets. Unlike most of the rest of the industry, we think the recent sharp decline in the price of crude oil is good for the economy, good for the industry, and a real help to American foreign policy.

Instead of worrying about the "dire" consequences, we should trust the market place to work and enjoy the fruits of its operation. We should resist the temptation to meddle with the freely moving prices, in particular, the temptation to impose some new form of controls such as an import fee, a new user tax or an added direct or indirect subsidy to crude oil production.

Our view is based on a straightforward theory of resource economics. At a price there is always a supply. As the world uses up the easiest to find and least costly to produce reserves it turns to more expensive reserves. Higher prices call up more investment and more production. When the resulting prices become too high the world uses less and turns to alternatives.

In this model, supply and demand balance at a price.

Most oil experts reject this market model because for the past fifty years the market has not been allowed to work. We have had a succession of private and public cartels, government regulations, and taxation and subsidy schemes which were designed to frustrate market pricing. Expert experience with a free market is severely limited.

But a sharp eyed economist watching the OPEC cartel in 1979 should have been able to see that the cartel was overreaching and that a big bust was in the works. At over thirty dollars a barrel We now know that the world has huge reserves of oil. At thirty dollars a barrel every fool with a drill went looking and most of them found what they were looking for. The problem is that there is a three to five year lead time in production and development.

This lead time turned the drilling boom of 1981 into the market bust of 1986.

The production boom was not limited to oil. Many of the drillers found gas, a resource our government confidently told this committee in 1976 was depleting so rapidly it would not be part of the energy picture by the mid-80's. New coal mines were opened, new nuclear power facilities came on line and many people began serious conservation.

Instead of realizing that the high price level would simply continue the surge in exploration and production, the cartel thought that its only management role was maintaining the high price. All this did was encourage even more production capacity and add to the market overhang.

We have finally reached the point where the only price maintenance option left for the world's great "swing" producer, Saudi Arabia, is to buy oil instead of selling it.

The present free market price should be teaching the cartel the lesson that in the long run the theoretical maximum price a cartel can charge is a price low enough to keep people from trying to enter the business and take advantage of the price. It looks like it will take $15.00 pricing for some period of time to get that lesson across.

We are convinced that if the cartel succeeds in restoring the price the restoration will be temporary because the rush to produce will resume world wide.

A lot has been said about the national security impact of lower prices. We think the overall result is favorable to the United States. Two of the Middle East's bad actors, Quadaffi and Kohmeni, will have their wings clipped significantly. Without money Quadaffi is a bad joke, and without money Kohmeni has a real problem exporting his brand of government.

The Soviets are the largest producers of crude in the world. They have used the export of crude and natural gas to earn hard currency and increase their economic hold on the Eastern European countries. The price decline frees the Eastern European economies of the transfer payments to the Soviets. It also deprives the Soviet economy of the hard currency needed to buy Western technology.

Anything that hurts the Russians, the Lybians and the Iranians can't be all bad.

But, it will be argued, the United States will be more import dependent since our production will be shut in. To this we say that some dependency is inevitable. The only issue is when we will be dependent and to what degree. A high price "import fee" strategy might make us somewhat less import dependent now at a terrific cost to the economy and to our international competitive posture. If we adopt a low price policy now we will have some of our own reserves left for the twenty first century.

We believe that the Japanese will take today's low energy prices and run with them. That is exactly what they did in the sixties when they took advantage of low world prices while we crippled our economy with energy prices three times higher because of the import quota system. High domestic prices and an import fee will simply keep us out of the competitive race once again.

The way to protect the United States against the possibility of future supply interruptions is to continue filling the Strategic Petroleum Reserve, insure that the reserve crude can be distributed easily, and begin the development of a strategic product reserve on the Eastern Seaboard where consumers are most import dependent.

If we make the reserve purchases from Mexico we can solve more than one problem at the same time.

A public policy that stops filling the reserve and does not consider the issue of supply interruption is dangerously shortsighted. We think that this is where Congressional time and energy should go, not into figuring out new ways to subsidize exploration and development.

A few words need to be said about the marketing side of the industry. Commentators have complained that the retail margins are too high. Our response is that it's about time that there are margins. For far too many years the exploration and production profits of the majors subsidized the rest of the company, especially the marketing division. The case on this point is made most effectively by the FRS reports published by DOE which show the cost of operations by sector, investment by sector and profitability by sector. Marketing is a high cost, capital intensive operation and has the lowest rate of return of all major company activity.

Upstream profits alone were the not only reason for low downstream profits. The tax benefits accorded to production have guaranteed the integrated companies an unbeatable advantage.

The E&P sector of the industry has been profitable without a break for more than forty years. There have been no down years, no layoffs and no serious reevaluations of activities. The tax subsidies have made this possible.

As a result, we spent years fighting companies like Arco which parlayed a combination of government subsidy and high production profit on the North Slope into a competitive disaster for independent marketers. But, when Alaskan crude is booked into Arco's West Coast refineries at $10 a barrel, even they want retail to be profitable. Their new pricing policy reflects their need for a fair return on investment in all sectors for the first time in many years.

There is some economic justice in a free market.

One other subject cries out for comment. There are regions of the country where the retail price has stayed at very high levels despite the sharp decline in the price of crude oil. For the most part, these regions are the ones without significant non-branded competition or are regions when the Federal Trade Commission did its "Mr. Fixit" routine on the major oil company mergers. In our view, the present selective failure of the gasoline market to pass price benefits through to the consumer is proof that we were right in saying that the real issue in an oil merger is vertical restraint and that the application of the Herfindahl index to retail competition as an index of the problems a merger creates is statistical garbage.

The Federal Trade Commission should be asked about these issues and the Congress should not accept theoretical answers now that it can see the obvious practical results of the Commission's "look the other way" policy.

In sum, we urge you to let the market keep working. Allow the market to make the price of oil just another non-political commodity price. Force the companies to use the futures markets to hedge and to plan for possible price declines as well as the prospect of permanent increases. Above all, keep public subsidy money in the form of tax breaks and special deals out of the industry.

Competition has worked in our sector of the industry for years and we are pleased to welcome our friends in exploration and production to a world where profits are hard to come by, risks are significant, and survival is not guaranteed. The competitive water is cold but it produces a tough and hearty breed of swimmer.

The Chairman. Thank you.

Senator Nickles.

Senator Nickles. Thank you, Mr. Chairman, and to our panelists, thank you.

I have several questions. Mr. DiBona, you mentioned that prices have fallen so much quicker than the rate at which they increased. They increased rapidly, but they did not increase as fast as they have dropped.

Mr. DiBona. I think that in fact the prices did rise at about the speed at which they are presently falling. The price about doubled in 1979 when the Iranian revolution was going on. It went from about $15 to about $30 in a relatively short period of time, I think on the same order. I do not have the exact amount.

But the point I was making is that after that price movement occurred, and similarly after the price movement that occurred in 1973, the winter of 1973–1974, there was an attempt to try and watch what happened with regard to both supply and demand worldwide and domestically. And people developed a set of relationships that took into account the short-run effects and the long-run effects.

And the short-run effects, for example, on gasoline consumption were price elasticities of about 0.15 and 0.2. That is, for a 10-percent increase in price, you got about a 20-percent decline in demand—excuse me—a 10-percent increase in price, you got a 2 percent-decline in demand or 1.5 percent-decline in demand. And for longer periods of time, that number grew to about 0.6 or 0.7.

There are similar relationships on the supply side. What this calculation does is simply assert that if these relationships are reversible, that is, that if a price decline has the same effect on demand increases, then you would reach the point where 80 percent of OPEC's capacity were being demanded within 3½ years at $15 a barrel.

Senator Nickles. What percentage of their capacity are they at today?

Mr. DiBona. Well, they are at 16, 17, 18 million barrels a day at the present time; let's say 17 million, and their capacity is something between 27 and 30. It is 80 percent of that 27 or 30 which is something on the order of 22 to 24 million barrels a day, which is the kind of inflection point. So you've got something, say, between 17 and 22, 23, 6 million, 7 million barrels of capacity that is surplus in the sense that once it is utilized, you can expect prices to behave as they did in 1979.

Senator Nickles. Mr. Hefner, a couple of quick questions. You mentioned several things. First, on the number of independents, I know in our State a lot of independents are either bankrupt or out of business or quit drilling.

Nationwide, do you have any idea on the number of independents we had a couple of years ago, how many we have today? Do we have a loss of 30 percent?

Mr. Hefner. I do not have any precise numbers on that, Senator Nickles. I know that our membership has decreased and it would be my educated guess that we've lost at least 25 percent of the independent operators nationwide.

Senator **Nickles**. We had one suggestion earlier today by a panelist that said well, maybe we ought to have a graduated, actually a reverse graduated scale for percentage depletion. In other words, the smaller producing wells would have a larger depletion, and the more productive wells would have a smaller depletion.

Do you have any thoughts on that?

Mr. **Hefner**. I've not had time to think about that very long, obviously, but it was an intriguing idea and I must say to you that I like the idea. I am encouraged by any ideas, including those that Dr. Schlesinger mentioned, by using the Tax Code to improve conditions for the domestic producer.

Senator **Nickles**. That might be one way. My guess is if we were successful in doing it, and incidentally in the Senate bill we maintained percentage depletion, it was deleted in the House bill over 2 or 3 years, and so it would be worked out in conference. But if we built it on that model, we would have a larger percentage depletion for, say, your smaller, less productive wells, and a less percentage depletion for more productive wells.

But in thinking of our State and in thinking of our country and the number of strippers, I think your statement said that at $15 we would lose 100,000 stripper wells by the end of the year.

Mr. Chairman, my State of Oklahoma has something like 77,000 strippers, many of which are being shut in. On those wells, when they are shut in, can they be shut down and then pickup production 1 year from now or 2 years from now, or do you lose that production on those wells? Our stripper wells average about 2.4 or 2.5 barrels per day in the State. If you shut one of those down that, say, is producing 1.8 barrel or something per day, if you shut that one down, can you pick it up 2 years from now?

Mr. **Hefner**. In most cases, no, and there are a number of reasons that you cannot. One of them is the basic-lease agreement with the royalty owner requires continuous production or loss of the lease.

In most States, the regulatory authorities have plugging provisions that require the plugging of a well in a certain period of 60 to 90 days after cessation.

Senator **Nickles**. Plugging. You are talking about pouring cement down it?

Mr. **Hefner**. Pouring cement down the pipe and abandoning it forever. And is our contention that we are going to lose hundreds of thousands of barrels of production through premature plugging of wells.

Senator **Nickles**. Mr. DiBona, you mentioned windfall profits tax. For your information, and if I get out of here in time to do it, I am introducing legislation today that would repeal windfall profits tax, so we would not get into this mess of situation. Right now, we have prices that are below the thresholds, as everyone is aware, and I think this gives us an opportunity to get rid of that tax and right now it is revenue neutral. Who knows?

I am a little bit dismayed because I was making more optimistic statements before the meeting that we had. The chairman held a closed committee hearing and then hearing the analysts today, I was more optimistic that there would be a price rebound sooner than what I have heard a lot of our experts testify today for a variety of reasons.

You have mentioned three to five. We have heard some people say as much as 10 years and so on.

Mr. DiBona. I would like to make clear what I said, what I asserted. I am not making prediction about the price. I am taking the hypothetical case that the price went to $15 and stayed there. How long would it be before 80 percent of the capacity was utilized is the calculation we did.

My guess is that the price could not stay at 15 that long. It would have some of the effects before you got to the crisis.

Senator Nickles. My inclination is to say that is correct, and I think again maybe that is looking at Algeria and some of the other countries that we know are in a tremendous bind and they are going to be trying to do something about it.

A couple of other quick points. I think two or three people mentioned repeal of the Fuel Use Act and deregulation of natural gas, and we already have legislation that does both of those and we are going to introduce legislation to repeal the Fuel Use Act alone. We scheduled hearings to do that.

You mentioned restoring depletion. We keep depletion in the Senate bill, and hopefully we will be successful. And I think that we will.

You also mentioned bank regulatory reform. We have made some good progress in that area this week. They have indicated a greater flexibility that should be of some help. And I certainly hope so.

Mr. Blum, one final question. You mentioned the imbalance of prices retail versus—would you mind supplying this committee with some of your data that would prove lack of competition is the reason why we have higher gasoline prices in Washington, DC than we do in Oklahoma? I am interested in that.

Mr. Blum. Sure. The question really comes down to the number of refiner suppliers who serve a particular market, and you have a much larger number aggressive refiner suppliers in the midcontinent who come up the Texas eastern pipeline system and come up the Williams Brothers pipeline system. There is just much more access, more diverse sources of supply.

Back at the time of the Texaco-Getty merger, a good deal of information was put on the table about the available sources of the Northeast and the elimination of Getty as a competitor had a significant effect. There is no question about that.

Mr. DiBona. I might add that our figures show that in fact if you take the actual crude acquisition price of refiners as opposed to the spot price, paper oil, not actual that can be refined, that back through February there was more than a penny-for-penny passthrough of every decline in crude prices, not only at the wholesale level but at the retail level on average in the United States of America; that these perceptions are in fact false, and that the figures do not substantiate them.

Senator Nickles. Mr. DiBona, just to follow up on that because, to give you an example, in my State you can buy unleaded gasoline for 80 cents, and I think the price over here is still $1.08 or something like that.

Mr. DiBona. There are differences between States and there are a number of reasons why that is the case. Some of them have to do with differential gasoline taxes.

I mean you can go to Chicago where the sum total of tax is in excess of 25 percent of its leaded gasoline. It is lower in other States. So there are different factors.

But in fact, on average, across the United States the decline in crude acquisition costs has been fully passed through into the market. In fact, it has been passed through faster than the price rises were passed through.

The Chairman. Mr. DiBona, would you provide for the record that analysis to me?

Mr. DiBona. Yes, sir. I will provide the figures.

[The information referred to follows:]

**American Petroleum Institute**
1220 L Street, Northwest
Washington, D.C. 20005
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# response

R-349

April 9, 1986

Q. Have gasoline and home heating oil prices fallen in proportion to crude oil price declines in early 1986?

A. Yes. Preliminary nationwide data for January through late March 1986 indicate that the per-gallon declines in both regular unleaded gasoline and home heating oil prices have fallen more than the average refiner acquisition cost of crude oil, according to U.S. Department of Energy and industry-published data.

The average refiner cost of crude oil from December 1985 through the week ending March 31, 1986 declined from $26.82 for a 42-gallon barrel to an estimated $17. That's a drop of 23.4 cents a gallon. Over the same period, the average retail cost of a gallon of regular unleaded gasoline at the self-service pump -- including 9 cents in federal and an estimated 13 cents in state and local excise taxes -- fell by 25.5 cents, from about $1.173 cents to 91.8 cents. The price of heating oil delivered to residential consumers (from December 1985 through the week ending March 24, 1986, the latest available data) declined from an average of $1.104 a gallon to 85 cents -- a drop of 25.4 cents.

## Background

The refiner acquisition cost cited above is a composite cost that includes both one-time purchases on the "spot" market -- which only account for about one-fourth of the oil purchased by U.S. refiners -- and oil purchased under normal, longer-term arrangements at the so-called "posted" price, which accounts for the remaining three-quarters of the oil purchased.

The "price of oil" can be many things -- the price of heavy, hard-to-refine oil in California; light, low-sulfur oil in Saudi Arabia; oil bought and sold by speculators on the commodities markets, based on their guesses about future price trends; convenient Texas oil; remote Alaska oil -- all are priced differently. What counts to the consumer is the average price the producers get from U.S. refiners.

All of these prices vary with supply and demand and with other changing market conditions.

Recently, however, both the spot price for crude oil and the crude oil "futures" traded on the commodity markets have been lower than the average refiner acquisition cost. These spot and futures prices are frequently cited in newspaper reports, leading readers to conclude erroneously that the average cost of crude oil to the refiner has declined more than retail gasoline and home heating oil prices.

A comparison of the December 1985 data with those of the week ending March 31, 1986 follows:

| Item | Average Price December 1985 | Average Price March 24, 1986 | Cents Per Gallon Decline |
|---|---|---|---|
| Refiner Crude Oil Cost ($/bbl average for month) | $26.82 | $17.00 | 23.4c |
| Retail Gasoline (including taxes) (cents/gal monthly aver. regular, unleaded, self-service) | $1.173 | 91.8c | 25.5c |
| Delivered Residential Home Heating Oil (cents/gal monthly average) | $1.104 | 85.0c[1] | 25.4c |

[1] For week ending March 24, 1986

Sources: December 1985 refiner crude costs and heating oil prices from U.S. Department of Energy; retail gasoline prices from Oil and Gas Journal survey; March data are API estimates.

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## LINKAGES AND MOVEMENTS IN PETROLEUM PRICES FROM THE WELLHEAD TO THE CONSUMER

Recent declines in crude oil prices have generated questions about the linkages between prices in crude oil markets and refined petroleum products prices. The purpose of this paper is to examine the historical linkages and lags between price changes at different market levels and the factors which contribute to these price movements.

This paper will first define and describe the different market levels and prices for petroleum. It will then examine actual historic price data to determine the lags between price changes at one market level and price changes at subsequent market levels. Regression analysis will be used to model the linkages between price changes at the different levels.

### MARKET LEVELS AND PRICES

Petroleum is traded in several more-or-less loosely defined markets, although "market" does not necessarily refer to a physical or geographic location. Most crude oil is traded under long-term contract, although the length of contracts vary and price terms are subject to periodic adjustment. The spot market is where volumes of crude oil and refined products are traded that are not under long-term contract; generally, only individual cargos are involved. The futures market is where contracts are traded for future delivery of specific

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The contents of this paper are for the purpose of study and discussion of government legislative or regulatory proposals and do not necessarily represent the views of the American Petroleum Institute or any of its members.

volumes of crude oil or refined products at specific prices.

The information available on contract prices in the current time period tends to be fairly limited. Posted prices, which are the prices refiners agree to pay for crude oil under contract, are available in the trade literature. But the volumes of oil purchased at the posted price generally are unavailable. At the same time, spot prices which, because of their volatility, are most widely cited in the press, have limited information content. The spot price quoted may only be a bid or offer and usually applies to a very small quantity of oil exchanged as a result of emergency needs or excess supplies at any given time.

Weighted average prices convey the most accurate information on total market activity, but are generally unavailable for current periods, and for many markets are unavailable at all. Most price information available from government agencies, such as the Deptment of Energy, is of the weighted average variety. Although weighted average prices reflect total market activity, they mask local variations in price and smooth pricing variations, giving an erroneous impression of a single prevailing price.

## PRICE LINKAGES--EMPIRICAL EVIDENCE

A careful examination of price changes at different points in the petroleum distribution system suggests linkages between markets and lags that occur as markets adjust to new equilibrium price levels.

## THE DATA

A data set covering the period January 1981 to November 1985, (the most recent available) consisting of prices on the crude oil spot market, refinery crude oil costs and wholesale and retail product prices was constructed and analyzed. Spot prices were daily spot market prices averaged by month for Middle East Light 34° and African/North Sea Light 42° crude oils. The composite refiner's acquisition cost represents refinery level crude prices. Wholesale prices were represented by weekly dealer gasoline tankwagon prices averaged over the month. Average monthly unleaded regular grade gasoline prices including tax represented the retail level.

Spot market prices were daily transaction prices for the two different types of crude oil as reported by market participants to the industry press. The daily prices were averaged for all business days during the month. Averaging daily prices over the month reduces the variance inherent in the data, but should better reflect market activity than prices on any particular day of the month.

The crude oil acquisition cost represents the average price paid by a refiner in some period for all the crude oil delivered to the refinery in that period. The acquisition cost reflects the transportation and insurance costs of bringing the oil to the refinery, as well as the prices of oil purchased under contract and volumes purchased on the spot market. Most crude oil is bought under term contract, contracted volumes reflecting planned refinery operations for several months ahead. Unexpected shortages of particular grades of crude oil are sometimes met through spot purchases, although in many areas refiners are able to borrow needed crude oil from other nearby refiners or to acquire additonal volumes from term suppliers.

The dealer tankwagon price represents the price a dealer pays for the bulk purchase of product, inclusive of transportation to the outlet. It is representative of most wholesale level transactions for gasoline. These prices were reported weekly, and the weekly data was averaged by month.

Retail gasoline prices represent volume weighted average final prices to the end consumer inclusive of all applicable taxes.

CORRELATION ANALYSIS

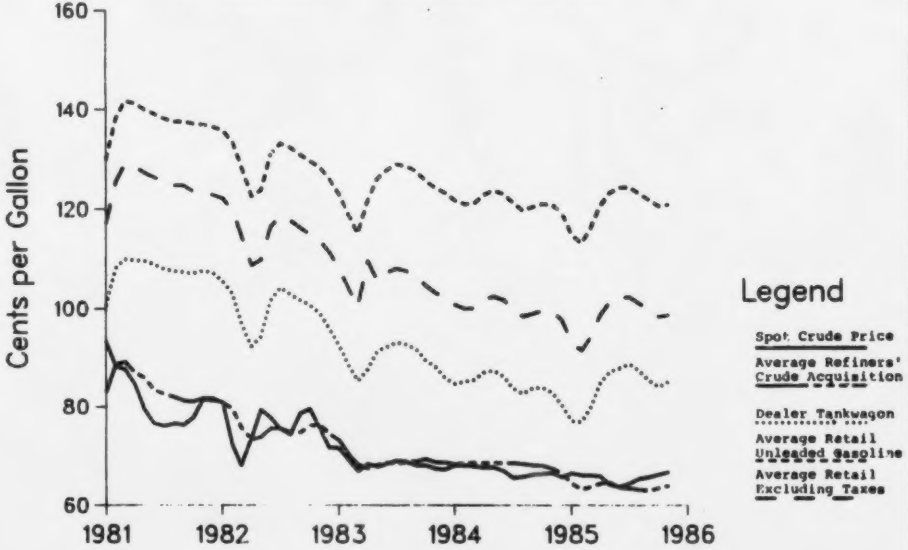
A series of correlations were calculated as a means to identify what lag structure exists between price changes at different market levels.

In the long term, that is, over several seasons, petroleum prices at the different market levels have exhibited very high levels of correlation. Correlation coefficients between same period prices at the different levels are typically above 0.90. This means that essentially all of the crude oil price decline since 1981 is reflected in declines in product prices.

Exhibit I shows the general downward trend in crude oil and product prices since decontrol of domestic prices. The refiners' acquisition cost has declined a total of 25.3 cents per gallon between the peak in

Exhibit I

## Prices of Crude Oil and Gasoline At Different Market Levels



Sources: Oil Daily, Petroleum Intelligence Weekly, and DOE

March 1981 and November 1985. The average unleaded regular gasoline price, after excluding taxes, has declined 30.3 cents per gallon in the same period. The larger decrease in refined product prices means that refiner and dealer margins have decreased in the past five years.

The long-term trend of declining prices obscures the linkages and lags between price changes at the different levels in the short-term. The correlation coefficients on the lagged variables are generally higher than for the same period variables, but it is difficult to test for significant differences between coefficients. In order to analyze the short-term lags between prices at the different levels it was necessary to first correct for the long term trend. This was done by taking the first differences between observations. This allows examination of correlations between changes in prices, rather than between price levels.

Spot markets for crude oil have become much more important to overall market activity in the past few years as volumes traded there have grown and market participants look to spot transactions for information on market conditions and direction. Estimates of volumes of oil traded on the spot market vary considerably, as volumes themselves vary over time. However, most estimates place current spot market activity as accounting for around 15% of internationally traded crude oil volumes.

Same period spot market price changes for the two different types of crude oil were found to be highly correlated, with a correlation coefficient of 0.89. This indicates that spot market prices for different crude oils adjust rapidly to changes in the spot market for any type of crude oil.

While the different spot crude markets adjust very rapidly to each other, a more interesting question is how quickly the bulk of the crude oil traded under longer-term contracts adjusts to changes in the spot market. The data indicated that there was very little correlation between the change in the current month's refiners' acquisition costs and the change in spot market crude oil prices. The same period correlation coefficients between the change in refiners' acquisition costs and the change in Middle East Light and African Light spot prices, as shown in Table I, were 0.087 and 0.141, respectively.

Changes in spot market crude prices did not "show-up" in refiners' crude costs for one to two months after the change, according to the data. There are probably several reasons for the observed lag period. This one to two month lag between spot and acquisition price changes is consistent with the observed transportation time from major producing areas to refining centers. The lag also likely results from the adjustment time required to identify a shift in the equilibrium crude oil price and to change contract terms under which most crude oil is bought and sold. Most estimates place contract crude oil volume at between 80% and 85% of market activity, with the remainder being spot transactions.

### TABLE I

### CORRELATION COEFFICIENTS BETWEEN REFINERS' ACQUISITION COSTS AND CURRENT AND LAGGED CRUDE OIL SPOT MARKET PRICES

| | CURRENT PERIOD | ONE MON. LAG | TWO MON. LAG | THREE MON. LAG |
|---|---|---|---|---|
| MIDDLE EAST LIGHT | 0.087 | 0.664 | 0.421 | -0.097 |
| AFRICAN/NO. SEA LT. | 0.141 | 0.693 | 0.483 | 0.012 |

Table II shows the correlation coefficients between changes in refiners' acquisition costs and changes in wholesale and retail prices. Comparing the values in Table II, the correlation coefficients for tankwagon prices in the current period and for one month lag are weaker than the correlations for retail prices. This is surprising given that the wholesale level is an intermediate level between the refinery and the retail level.

A closer examination of the data reveals two possible reasons for the weaker correlation between acquisition cost changes and wholesale price changes than between acquisition cost changes and retail price changes. A strong seasonal pattern is present in wholesale prices which is not closely correlated with the seasonal pattern present in the crude oil data (see Exhibit II).

The effect of changes in the spot market for gasoline may also contribute to the weaker correlation between acquisition cost changes and wholesale price changes. The correlation between changes in

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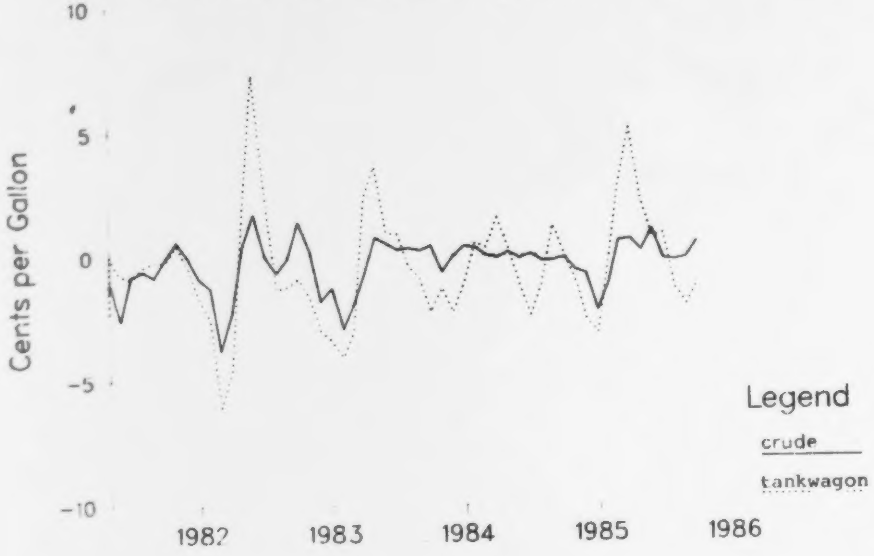
Exhibit II

## Month to Month Changes in Acquisition Costs and Dealer Tankwagon Prices



wholesale prices and changes in spot gasoline price changes in the current period is 0.205, while the correlation between changes in spot prices and acquisition costs is 0.124. These are weak correlations, but the effect of the spot price changes may be enough to weaken the relationship between acquisition cost changes and wholesale price changes. There is also a strong correlation, 0.684, between spot gasoline price changes in one period and changes in dealer tankwagon prices in the following period. In any case, the figures in Table II indicate that there may be other factors influencing these prices and that their independent effect needs to be clarified. For this reason, we estimated an econometric model of the price relationships.

TABLE II

CORRELATION COEFFICIENTS BETWEEN REFINER'S ACQUISITION COSTS AND WHOLESALE AND RETAIL PRODUCT PRICES

| | CURRENT PERIOD | ONE MON. LAG | TWO MON. LAG | THREE MON. LAG |
|---|---|---|---|---|
| DEALER TANK WAGON | 0.588 | 0.238 | -0.152 | -0.337 |
| RETAIL GASOLINE | 0.717 | 0.393 | -0.212 | -0.455 |

## REGRESSION ANALYSIS

In order to construct econometric models detailing the linkages between prices at different levels we hypothesisized that price changes in crude and product markets should differ only by changes in refining and marketing costs and margins. Further, these margins should tend toward equilibrium levels leading to a high correlation between the different prices.

A preliminary analysis of the data indicated a high degree of autocorrelation between observations when modeling the variables in levels and, to a lesser extent, in natural logs. In order to overcome the estimation problems associated with autocorrelated variables, we used the first differences, that is, the period to period change in the variables. A check of the Durbin-Watson statistic revealed no significant autocorrelation problems after differencing.

The changes in retail price were modeled as a function of price/cost changes at the refinery and wholesale levels based on price changes in upstream markets. The model estimated consists of three equations, each determining the price/cost at one of the market levels.

The first equation will focus on the changes in refiners' acquisition costs. The refiner acquisition cost is known to be a function of the prices paid (both spot and contract) for crude oil received at the refinery. Since the direction of causality is assumed to run from changes in spot prices to changes in contract prices, past spot price changes will be used to estimate current refiner acquisition costs. The equation can be estimated following the general form:

$$dRAC_t = dSP_{t-i} + e_t$$

where $dRAC_t$ is the change in refiner acquisition cost in period t, and $dSP_{t-i}$ is the change in the spot crude price in period t-i, where i is equal to the laged period or periods found to have a significant impact, and $e_t$ is a stochastic error term.

The second equation focuses on the changes in dealer tankwagon (wholesale) prices. The refiners' acquisition cost is assumed to be the largest cost component of the wholesale price, although competition from spot-purchased product would presumably influence refiners' wholesale prices. Thus, we include spot gasoline price changes in the model. An examination of the dealer tankwagon prices in Exhibit I reveals the presence of a strong seasonal pattern in the wholesale prices, that is not present to the same extent in the refiners' acquisition cost. To separate the impact of seasonality on price changes, it is desirable to explicitly include a variable to capture the seasonal effect. An equation of changes in dealer tankwagon prices then takes the general form:

$$dDTW_t = dRAC_{t-i} + dSG_{t-i} + S + e_t$$

where $dDTW_t$ is the change in dealer tankwagon prices in period t, $dRAC_{t-i}$ is the change in refiners's acquisition cost in the t-i periods, $dSG_{t-i}$ is the change in spot gasoline prices in the t-i periods, S is a term to capture the seasonal effect, and $e_t$ is the current period uncorrelated error term.

The last equation focuses on the changes in retail prices. The dealer tankwagon, or wholesale, price is the largest component of retail prices. The tankwagon price should already incorporate most of the observed seasonality in prices making it unnecessary to include a seasonal term in the retail model. The tankwagon price should also reflect changes in refining costs not modeled elsewhere. The general form for the retail price change equation is simply:

$$dR_t = dDTW_{t-i} + dSG_{t-i} + e_t$$

where $dR_t$ is the change in the retail price in period t, $dDTW_{t-i}$ is the change in dealer tankwagon prices, $dSG_{t-i}$ is the change in spot gasoline prices in period t-i, and $e_t$ is an uncorrelated error term.

## ESTIMATED MODELS

Ordinary least squares regression analysis was used to estimate the functional forms of the three proposed price change models. One of the characteristics of a good model is that it is parsimonious, that is, it has the fewest number of parameters necessary to adequately specify the model. In that light, variables found to be nonsignificant have been dropped before estimating the final forms of the models.

The estimated equations of the price change model are shown in Table III.

Table III
ESTIMATED PRICE CHANGE MODELS

(I)

$$\begin{array}{lllll} dRAC_t = & 0.153\ dSC_{t-2} & +\ 0.188\ dSC_{t-1} & +\ 0.103\ dSC_t & r^2=0.656 \\ & (4.61) & (5.60) & (3.17) & F= 35.9 \end{array}$$

(II)

$$\begin{array}{lllll} dDTW_t = & 0.843\ dRAC_t & +\ 0.319\ dSG_{t-1} & +\ 1.524\ S & r^2=0.646 \\ & (3.82) & (4.17) & (3.28) & F= 34.4 \end{array}$$

(III)

$$\begin{array}{lll} dR_t = & 0.916\ dDTW_t & r^2=0.816 \\ & (15.64) & F= 244.5 \end{array}$$

Note: student t values in parenthesis, $r^2$ is adjusted for degrees of freedom

Equation I shows that current period changes in refiners' acquisition costs are a function of changes in spot crude prices in the current period and in the previous two periods. The spot crude prices used were for African/North Sea Light crude oils which seem to better reflect the types of crude oil used in the U.S. The $r^2$ indicates that the model explains about 2/3 of the observed variance in the changes in refiners' acquisition costs. The F statistic indicates that we can reject the null hypothesis, that the variables do not explain the observed changes in acquisition cost.

The coefficients on the independent variables, the changes in spot prices, do not sum to one, indicating that current period changes in refiners' acquisition costs only partially reflect recent spot price changes. According to the model, on average, a one dollar change up or down in spot crude oil prices was reflected in an approximate 45 cent change in refiners' acquisition costs over three months.

The short-term nature of the model, and the use of first differences, means that the frequent changes and reversals in spot prices over the past five years dominates the structure of the model. However, in the longer term, the refiners' acquisition costs have fully reflected the long term changes in spot crude prices, a factor which does not seem to be reflected in the model. Refering back to Exhibit I, the graph shows that the spot crude price fell far below the refiners' acquisition cost on several occasions, only to return to a level near the average acquisition cost.

It would appear that the long term contract market discounts short-term movements in the spot price as possibly being reflective of short term disequilibrium conditions. While changes in the refiners' acquistion cost may not exactly follow the period to period changes in spot prices, over the longer term the level of refiners' acquisition costs is highly correlated with spot price levels.

Equation II shows that changes in the wholesale, or dealer tankwagon, gasoline prices are a function of the change in current period refiners' acquisition costs, the change in last period spot gasoline prices, and season of the year. The $r^2$ indicates that the model explains about 2/3 of the variance in the dependent variable, and the F statistic indicates that we can reject the null hypothesis, that the variables in the equation do not explain the variance in the wholesale price changes.

The coefficient on changes in refiners' acquisition cost indicates that about 84% of a change in crude costs is passed on as a change in wholesale prices in the same month, other things being equal. The coefficient on the seasonal variable means that prices increase, on average, about 1.5 cents per month during the second quarter of the year, other factors being equal. The spot gasoline market has a significant impact on changes in wholesale prices with a one month lag. Many factors likely influence spot gasoline prices, such as inventory changes or changes in petroleum markets outside the U.S. The data show that market changes as reflected in the spot price influence the wholesale gasoline price independent of changes in refiners' acquisition costs, with about a one month lag.

The third equation shows that current period changes in retail prices (including taxes), are dependent on same period changes in the dealer tankwagon price. The $r^2$ indicates that the model explains more than 80% of the variance in retail gasoline price changes, and the F statistic indicates that we can reject the null hypothesis, that the variables do not explain the variance in the retail price changes. The coefficient on the independent variable, changes in wholesale price, indicates that more than 90% of the change in wholesale prices is reflected in changes in retail prices in the same month.

It should be noted that spot gasoline prices, both lagged and current, were found not to be significant in determining retail prices, probably due to the volatility and high degree of seasonality in spot gasoline prices.

If we hold all other factors constant, it is possible to use the three equations in the model to trace the path of a change in spot crude oil price through to a change in retail gasoline prices. On average, a one dollar change in spot crude oil prices will be reflected as a 45 cent change in refiners' acquisition costs over a three month period. About 85% of the change in refiners' acquisition costs will be reflected as a change in wholesale gasoline prices in the same month as the change in crude costs. More than 90% of the change in wholesale gasoline prices is then passed on as changes in retail prices in the same month. Combining the changes at the wholesale and retail level, for a change of one dollar in the refiners' acquisition costs, more than 75% is reflected in changes in retail gasoline prices in the same month.

Several factors besides crude oil costs can and do have an impact on the speed of price adjustment as well as the degree to which crude oil cost changes are reflected in product price changes. These factors account for a large part of the variance in price changes not accounted for by the models above. For example, transportation and refining costs have increased and margins at all levels have changed as conditions in the world petroleum market have shifted. Also, the cost of compliance with new health, environmental, and safety regulations--most recently Superfund and the EPA's lead phasedown--could also increase the cost of providing product to the market. It has been estimated by the EPA, for example, that the added cost of complying with the lead-phasedown regulations will cost an average of 2-3 cents per gallon. This cost, of course, will be higher for some refiners than others, and will also be higher for the marginal gallonage sold.

The three equations in the model explain most of the variance in the price changes at the different market levels, but the models do not represent perfect predictors of the lags between price change at the different levels. The estimated equations represent averages over the 60 month period covered by the data. There are periods when the adjustment took place faster, as well as slower, than in the average. There are also periods when the amount of the price change passed on from one market level to the next was more, or less, than the average stated in the equations. Thus, there will be periods when the observations do not exactly follow the patterns in the equations.

## SUMMARY AND CONCLUSIONS

In the long term, refined product prices are almost perfectly correlated with crude oil prices. In the shorter term, conditions in local markets, contract price lags, and factors particular to the product will have a dominant impact on prices.

Historically, changes in spot crude prices have been reflected in changes in refiners' crude oil acquisition costs with a lag of one to two months. In general, about 75% of the change in refiners' crude oil costs is reflected in changes in retail prices in the same month, other factors held constant. The retail prices reflect the rest of the crude cost change in the following months.

Retail prices in different markets may also be observed to differ due to local conditions such as taxes, zoning regulations, divestiture requirements, etc., that prevent markets from equilibrating at exactly the same level.

Various cost items can and do affect the degree to which crude oil price changes are reflected in product prices. Transportation and refining costs have increased, while the costs of compliance with new heath, environment, and safety regulations are reflected to varying degrees in the final product price. The cost of complying with the regulatory burden has been increasing, offsetting some of the decreases in crude oil costs.

The **Chairman**. Gentlemen, it has been a long day and I appreciate your appearance and testimony here today. I do want to ask you to speculate with me for just a moment.

We asked the last panel questions about what are the Saudis up to, and I think that was after having established the belief on the part of many that what the Saudis are doing and what is happening within OPEC really is affecting what is happening in the world dramatically.

First, do you agree that OPEC or OPEC members have the capacity to affect marginal supply in a way that has a dramatic effect upon price?

Mr. **DiBona**. Yes, sir.

Mr. **Blum**. I do not think so. Not anymore. I think what has happened is something like this: Back in the 1960's, the American companies who were Ramco partners—and this material is in hearings of the Foreign Relations Committee in the early 1970's—told the Saudis very clearly that the risk of raising the price too high was a risk of getting other people to produce lots and lots of crude and lowering the long-term value of their own resource by turning people to natural gas, by turning them to coal, by turning them to nuclear.

It has turned out that that warning to the Saudis was correct, and I think that what they are up to now is the realization that if they want to have a resource—and they have reserves that would continue to produce for the next 50 to 60 years—if they want to see value out of that reserve, they have to make sure that they do not price it so high that people say we don't want it, we don't want anything to do with it.

So I think they are permanently stuck at price levels in constant dollar terms of under $20 a barrel. And I think that OPEC as an organization cannot pull itself together either because there are other countries there which, of necessity, the minute they find a well, must produce every barrel of oil they can get simply because their revenue requirements are so high that long-term considerations of that variety do not work.

Mr. **DiBona**. I think your question was not whether it was unlimited but whether it was very substantial. And I think they demonstrated that they can make the price go down by a factor of 2.

The **Chairman**. Mr. Hefner.

Mr. **Hefner**. I agree completely.

Mr. **Dewes**. And I think you also have to realize they could get together. We do not think this is a high probability case, but they could get together, as Dr. Schuler was saying, and make a decision to bring it back up again. So I think they have got the control on both ends if they can reach common agreement.

The **Chairman**. Are you in agreement, Mr. Dewes, that we are facing a substantial permanent loss of production capacity at the lower prices in the world market today?

Mr. **Dewes**. If the lower prices persist, yes, we are going to lose reserves, resources that we know today that would be economic at a higher price.

The **Chairman**. How long and how deep do the price cuts have to be before we get dramatic decrease in production capacity, permanent decrease?

Mr. **Dewes**. I am not a geologist or a production engineer, so in terms of the actual mechanics of the wells, which Mr. Hefner perhaps is a better person to speak to, I am not sure. But I think one of the dangers we have is variability, the uncertainty in pricing, the expectation that prices might turn around in a few months, or maybe in some cases 1 year or 2. There might be some wells that people would actually take a negative cash-flow on and would keep producing, even though it was out-of-pocket cost, because they thought down the road that they would have higher prices and they could get a return.

It is almost like drilling a new well, but if you have the perception that it's going to be for a very long time, then you're going to cut your losses and you're going to shut that production in.

The **Chairman**. Mr. Hefner, I see you nodding your head.

Mr. **Hefner**. I agree with that. There are producers today producing marginal wells at a loss because once they recognize that this anticipated or expected price will never occur, then those wells will be abandoned, and when they're abandoned it's forever.

They are hoping today that within 60 or 90 days of suffering a loss, that if they can get a higher price for that product, it will again permit them to be profitable.

The **Chairman** Is it possible to generalize in terms of what is a short time and what is a long time? What is forever?

Mr. **Hefner**. It is just the choking point of those individuals who are producing at a loss.

The **Chairman**. It is a variable according to each individual and each individual production source?

Mr. **Hefner**. Yes, sir. And I had a call just yesterday from one producer who told me about production he had in the State of Utah which was averaging in excess of 40 barrels a day per well. That is much more than you have heard testimony that qualifies a stripper as a stripper. And he is losing money at $15.

The **Chairman**. I have heard it summarized in kind of broad general terms that if price did not go below $15 on the average and did not stay that low for a year, you would not see much decline. But if it went to $15 and stayed for over a year, you would see a measurable decline.

Are those good ballpark figures?

Mr. **Hefner**. Those are my ballpark numbers as well as yours. But I cannot tell you how accurate they are until time proves you are wrong or right.

The **Chairman**. Mr. DiBona.

Mr. **DiBona**. You are, of course, talking about the cessation of current production?

The **Chairman**. Yes, I am.

Mr. **DiBona**. Production for which the investment has already been made. At $15 there is already dramatic decline in the exploration of future reserves. So production will fall. You have to remember that we are currently producing out of U.S. reserves, a little over 3 billion barrels a year.

We have got something like 26 or 27 billion barrels in that reserve so we have something on the order of 8 to 9 years of reserves. In order to continue producing at current levels through the end of this century, which is 15 years, we are going to have to find 1½ times our current reserve. We are going to have to find all of that in order to just keep the production level.

So it is not just the decline that will occur out of current production, but the failure to look for new oil that is the real hazard.

The **Chairman**. Both are hazards and they compound.

Mr. **Blum**.

Mr. **Blum**. The loss of current production is in my mind of much greater concern than the failure to invest in new exploration.

I participated in a National Academy of Sciences study of what the long-term outlook was for petroleum production. And if one looks at it without the immediate concern for the people in the industry and their immediate plight, the choice as a public policy matter becomes when do you want to drain the American reserve and at what price?

There is some finite limit on the amount of oil we have. We have already reached a plateau that puts us at a price level—cost of production, not a price—well over the rest of the world. We can produce as much of that as we like by raising that price level and encouraging it.

If we do that, though, what we do is create a situation where, by the year 2020, we have got nothing domestic to produce. And my view would be that we are much better as a matter of public policy of having that produced gradually and always having some domestic industry.

The **Chairman**. Certainly the question of being above the world cost of production was what led to this report which was what had led to the program adopted 30 years ago. So it is not new that we are above the world cost of production.

Mr. **Blum**. But you see, by keeping us over the world cost of production, it did not protect us from foreign dependence at all. The only issue was the level of foreign dependence and the timing of it.

Mr. **DiBono**. We are not talking, Mr. Chairman, none of us here are talking about achieving U.S. prices above world prices. We are talking about current conditions in the Tax Code which in fact discourage U.S. production at current world prices.

Mr. **Blum**. And I cannot disagree with that.

Mr. **Hefner**. I am very, very concerned about the loss of the people, the people in the industry. If we lose those people while we are producing or buying reserves from foreign countries, we lose the people and the expertise that go with finding and producing our domestic reserves and we don't turn those on and off overnight. It takes several years.

The **Chairman**. Gentlemen, I thank you very much. I know that the Government does go from complacency to panic, just as the Nation does.

I suspect there is some panic in the industry right now. There is no complacency in industry right now. I remember, too, that as prices were rising very rapidly, it was thought that it would take a long while for us to get above 2,800 rigs. And we got to 4,500 rigs in less than 18 months. And the question was, we did not have enough tubular steel capacity in this country in order to fabricate new rigs.

So to some degree, we have been able to adapt more rapidly than has been forecast even by those in the industry. But I am concerned. I am certain that the industry can accept a downturn in profitability, in margins, and even have negative cash-flows, and can survive for some period of time.

I am not certain how far we can see that go without being concerned about national security. It is not just in petroleum, although this hearing is directed to that. I am very much concerned about the basic industry. We are not vulnerable on the food production front because we have a great surplus of food, but we would be extremely concerned if we had the same pattern with respect to production and consumption in basic food supply as we see in basic energy supply. And energy is scarcely less important to a modern industrialized society than just feeding our own people.

That leads to the truth of what Dave Stockman said about me in some recent publication, in a magazine to be unnamed in this hearing, that "Jim McClure is an absolute nut on energy." I accept that. I am.

Gentlemen, thank you very, very much for your testimony here today and we will stand in recess.

[Whereupon, at 2:59 p.m., the hearing was recessed, to reconvene Thursday, March 20, 1986.]

# DOMESTIC AND INTERNATIONAL PETROLEUM SITUATION AND THE IMPLICATIONS OF FEES ON IMPORTED OIL

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THURSDAY, MARCH 20, 1986

U.S. Senate,
Committee on Energy and Natural Resources,
*Washington, DC.*

The committee met, pursuant to notice, at 10:30 a.m., in room SD-366, Dirksen Senate Office Buildling, Hon. Don Nickles presiding.

Present: Senators Nickles, Hatfield, Murkowski, Hecht, Evans, Johnston, Bumpers, Ford, and Bingaman.

Also present: Howard Useem, professional staff member; and Elizabeth Moler, counsel for the minority.

## OPENING STATEMENT OF HON. DON NICKLES, A U.S. SENATOR FROM THE STATE OF OKLAHOMA

Senator Nickles. I want to thank all of our panelists and guests this morning and apologize for the hour delay. We are currently having a briefing by Secretary Schultz and Ambassador Habib on the Nicaraguan situation. I think probably a majority of the Senate is still in that briefing. That is the reason that several of my colleagues won't be joining us at least for some time this morning.

Needless to say, that is an important issue before Congress today, and probably next week, as well. I also want to thank those of you who came from out of the Washington area to testify today. Also, many of you I think participated in the Senate Finance Committee hearings dealing with an oil import fee.

I have a statement, which I will insert for the record on the issue of an oil import fee, or oil equalization tax. I will make a couple of comments concerning it before the panel begin their statements.

The question of an oil import fee has been before Congress, has received a lot of attention. Right now, it does not appear to have the votes. I prefer to call it an oil equalization tax instead of an oil import fee, and by equalization tax, I mean the fact that our domestic producers have been forced to pay, since passage of the windfall profits tax in 1980, a total of $77 billion; imports have paid zero. So we have actually had to pass a policy for the last several years that has encouraged imports and discouraged domestic production. I find that to be very bad energy policy, and very anti-free enterprise. That tax should have never been passed in the first place and it is still on the books. That is the reason why I call it an equalization tax. I think imports should have to pay at least as much tax as our domestic producers have had to pay. I have also introduced legislation to repeal the windfall profits tax, which Senator McClure and many others have joined me on. I hope the Senator from Louisiana will join me on as well. That is a bare minimum of what we should do.

Right now, I think we have a window of opportunity, to repeal the tax, with low oil prices and with oil prices currently being below the threshold amounts. It is my opinion that oil prices will increase some time; it is only a question of when. I think as the oil cartel, as evidenced by the Saudis when they worked to increase their control over export markets, and as we become more and more dependent on imports, I think you will see an increase in those prices. It is my hope that we will have the windfall profits tax repealed before that happens, not to mention the paperwork burden that is involved with it, as well.

We have also scheduled some hearings on legislation that Senator Johnston, myself and others, have been interested in and have worked on for some time, and that is on natural gas, specifically for the repeal of the Fuel Use Act. This committee has hearings scheduled on April 15.

It is my hope, my desire, and my intention to push forward on a bill to repeal the Fuel Use Act, and if we can go further on deregulation of natural gas, we will do so, as well. But we are going to move something this year. We will take what we can get and move it through this committee, and if we can't get it through the committee, which I think we can, we will move it to the floor, anyway.

We have Senator McClure's remarks for the record, and as he is ill with the flu, they will become part of the record.

[The prepared statements of Senator McClure and Senator Nickles follow:]

Statement of
The Honorable James A. McClure
Chairman, Committee on Energy and Natural Resources
at the oversight hearing
on the implications of fees on imported oil
March 20, 1986

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Good morning. Today the committee continues its series of oversight hearings on the international oil situation by looking at the implications of a fee on imported oil. This is the third Committee hearing on the petroleum situation and alternative policy options. The fourth and final hearing in the series is to be held March 25, at which time testimony is to be taken from Administration representatives.

As all of you are aware, the price of oil has dropped dramatically in recent months. With that drop has come talk of implementing a fee on imported oil.

Assuming an $8 per barrel charge, the Senate Budget Committee estimates that an import fee would generate $16 billion to $17 billion in revenue annually.

The most obvious attraction of such a fee is the windfall of revenues it would provide the government -- a fact that holds particular significance in this era of Gramm-Rudman-Hollings.

In addition, an oil import fee would encourage conservation by virtue of the increased price, and preempt temptation to step up consumption from unstable foreign suppliers because the price of oil, at present, is at its lowest point in a decade.

An oil fee also would result in stepped up domestic exploration and development -- something that has suffered as producers' profits have dwindled.

On the flip side, it can be argued that the economic growth that has been fostered by the fall in oil prices would be reversed with impostion of an import fee. Inflation and interest rates, now trending downward, would rise.

The cost of doing buisness would rise as well -- particularly in the huge-oil-consuming Northeast states -- making products more expensive at home and less competitive on world markets.

Oil import fees have been proposed as an option to protect the United States' energy and national security. I have traditionally opposed such fees as having, on balance, more negative elements than positive.

That was, however, before Saudi Arabia exercised its market power to manipulate oil prices and reduce the incentives for domestic exploration and development. Perhaps it is time to reevaluate the issues raised by import fees.

The import fee question is, without doubt, an interesting one with many questions -- most of which I hope will be answered today by our witnesses.

Regardless of the fate of proposed import fees, I think it's important to stress, in looking at the broader scope of the world oil situation, that we not be lulled into believing that oil exporting nation's are trying to do us a favor.

The price fall has occurred because Saudi Arabia is using the oil weapon to discipline other exporting nations into cutting back production in order to artifically increase prices.

Because of the Saudis' actions, an emergency meeting of OPEC began last Sunday in an effort to reestablish OPEC's control over the marketplace. If the OPEC ministers agree to reduce supply, and if they successfully implement such an agreement, the oil "glut" will disappear and prices will increase.

In my opinion, it would be foolish to base our long-term energy and economic policies on the assumption OPEC will not be successful, either now or in the future, and that oil will forever remain abundant and inexpensive.

The lesson we should be learning from today's plummeting prices is that the oil weapon still exists, just as it did in 1973 and 1979. A marginal increase in OPEC production has driven oil prices down to their lowest levels in recent years. A marginal reduction in production would lead once again to shortages and skyrocketing prices.

With the oil market affecting so many aspects of American life, I continue to be disturbed by the Administration's complacency about energy policy. The attitude expressed by the Administration witnesses in this Committee's recent closed hearing seemed the marketplace, and that must be good."

While it is true that price is set by the marketplace, the marketplace is controlled by a handful of oil-producing nations, located thousands of miles away, who have their own interests at heart, not ours.

The upshot of current attitudes is to commit us to a substantial increase in our oil dependency in the 1990s and beyond. Falling oil prices worldwide already have resulted in dramatic reductions in domestic exploration. Last week's witnesses agreed that by 1995 imports could rise to nearly half of domestic consumption. In short, the seeds of the next energy crises are now being sown.

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U.S. SENATOR
**Don Nickles**
OKLAHOMA

## STATEMENT OF SENATOR DON NICKLES BEFORE ENERGY COMMITTEE
## MARCH 20, 1986

Mr. Chairman, I want to thank you for elevating the issue of an oil import fee to the full committee level for hearings. As you may know, I prefer to call it an equalization fee because the windfall profits tax has taken more than $77 billion from our domestic energy industry while nothing has been done to imports. Our national energy policies have put the screws to our own domestic industry, primarily to four states, and has given OPEC a free ride.

Our domestic energy industry is a basket case today. Energy prices have dropped 50 percent in the last four months. And while plunging prices may give the economy-at-large a temporary economic boost, there is little doubt in this Senator's mind that there will be long term negative effects growing from the euphoria we see today. The free market is not at work here. It is the Saudis that are causing severe market distortions in an attempt to exert control over world exports. An equalization fee is one idea that would give the Saudis, among other things, heartburn.

Since 1980, our short-sighted energy policies have encouraged imports and discouraged domestic production. I have introduced legislation, cosponsored by the Chairman, Senator McClure, and Senators Symms, Gramm, Boren, and Hecht to repeal the windfall profits tax. This tax was the most anti-free enterprise tax ever imposed on an American industry. Although repealing it now would have little economic impact in the energy industry, because oil prices have fallen below the tax threshold, it would send a positive signal to the industry that Congress does want to see a strong, viable domestic energy industry. And it would work as an incentive for future production.

Additional action that can be taken to bring immediate help to our energy industry is the repeal of the Fuel Use Act. As I have in the past two Congresses, I have again introduced legislation to repeal the Act and I will be holding hearings on this April 15.

Unless action is taken to aid our domestic energy industry, I'm afraid that it won't be long before OPEC will have successfully shut down our domestic energy production capabilities and then tighten the noose around our necks once again.

As an example of the problems we face today because of declining energy production, one only needs to look at the stripper well situation. There are about 452,000 stripper wells in production in the United States which produce 14 percent of our total production. As these wells are shut-in, as they no longer become economical to operate, they will likely never be opened again.

Reports coming in from the field indicate that at today's prices, about 25 percent or 200 to 400 thousand barrels a day production has or soon will be abandoned. Reliable estimates also predict that an additional 700,000 barrels a day of unrecoverable production capacity will be lost in the next year. The number of rotary drilling rigs in operation has dropped from a high of about 4600 in 1981 to 1200 today. In my state of Oklahoma, we had a high of 984 operating rigs in 1981, today we have 169.

Although Oklahoma is one of the hardest hit states, since more than 60 percent of our production comes from stripper wells, many other states are being affected. I'm not just talking about Texas, Louisiana, Alaska and Arkansas, but also California, New York, Ohio, Pennsylvania, West Virginia, Kentucky, Wyoming and New Mexico. All of these states are losing substantial production capacity.

The pain being felt in these states is more than just in the oil field, it is jobs, both in the energy industry and in the services which support it, and a pending financial crisis which threatens banks around the country. In my own state, the number of oil and gas jobs lost in the past three years has reached 40,000. That's not counting jobs lost in support services.

As I previously mentioned, an equalization fee is only fair. Imports should have to pay as much as domestic oil. A fee recognizes the consequences that a gutted domestic energy industry would have on the energy security of our nation. And it recognizes the inequities which have existed between domestic and foreign producers.

Although many members of the Senate and House continue to oppose such a fee, I hope we don't wait to act on this proposal until OPEC has us firmly in their grip once again.

Senator NICKLES. I am pleased that we have Senator Johnston and Senator Evans join us this morning.

Senator Johnston, do you have any opening comments?

## STATEMENT OF HON. J. BENNETT JOHNSTON, A U.S. SENATOR FROM THE STATE OF LOUISIANA

Senator JOHNSTON. Yes, I do, Mr. Chairman. Thank you, very much. The Nation is just beginning to understand what is happening in the so-called oil patch, Louisiana, Texas, Oklahoma; it is sheer economic devastation. My State, I would characterize as being in a depression, not a recession, but a depression At last count, unemployment was 12.2 percent, and rising, rising fast.

We have 21 labor markets with a higher than 15 percent unemployment. We have eight labor markets with a higher than 20-percent unemployment, and that was at last count. As a matter of fact, in the last month for which figures were available, February, they did not issue figures for Louisiana. They said there as a statistical abnormality, which I think means that they did not believe their own figures because they were rising so fast.

Our State is facing a revenue shortfall of $700 million to $1 billion. You can be one of these free-market economists and say that it just the free market working, you will have to readjust--Louisiana, Texas, Oklahoma. That is just the market's way of rearranging itself.

If indeed this were a free market, we could perhaps justify this economic devastation with that kind of argument. But this is not a free market. This is predatory pricing by the Saudi Arabians who have decided they are going to run down the price of oil until they have run all the marginal producers out of business. And by marginal producers, they mean Texas, Louisiana, Oklahoma, New Mexico, Wyoming, and other areas that produce domestic oil for the United States market.

And if we are stupid enough, as a country, to sit by and let this happen to us, to let our domestic oil business be not only hurt, but permanently shut down in large measure, then I think we deserve that which would happen to us. The Energy Information Administration of this Reagan administration has plotted what they consider to be the oil import picture based upon a price of $20 oil. They say we will be importing more than 10 million barrels of oil a day by 1995.

Now that means that we will triple our oil imports and be more than 50 percent reliant upon foreign producers by the year 1995, based on $20 a barrel oil. They didn't even make projections based on $15 or $10 a barrel oil. I suppose it would be even more than that. So, we are headed toward a policy, right now, today, unless changed, that will make the country more dependent than it ever was upon the Middle East, upon the Saudi Arabians, upon foreign producers. It will make their economic stranglehold over this country stronger than it ever was before, and we are headed right in that direction.

Now, it seems to me we have a choice. We can say, let us let that happen to us; let us let our whole foreign policy, our whole economy become hostage to foreigners, or we can do something about it.

Alternatively, we can enact an oil import fee, which will not only raise revenue for a badly bloated deficit, but more importantly, it will help save a domestic oil business.

Domestic oil business is not important just in Louisiana, Oklahoma, and Texas, in the so-called oil patch. It is essential to this Nation, and as a Nation we ought to say we are going to keep that industry. We are going to keep it because we need it. We need it not only for strategic reasons, foreign policy reasons; we need it because it is vital to the country's survival.

We are going right back into the same cycle of high prices and shortages and lines at the gas pump—not this year, not next year—but in the foreseeable future, as already predicted by the Energy Information Administration.

Ladies and gentlemen, it is our choice, and it is shame on us if we miss the chance to do it while we can.

Senator NICKLES. Thank you, Senator Johnston.

[The prepared statement of Senator Johnston follows:]

Opening Statement by Senator Johnston
Commmittee on Energy and Natural Resources
United States Senate
Hearing on the Implications of Fees on Imported Oil
March 20, 1986

Mr. Chairman, I want to thank you publicly for responding to my request that the Committee hold a hearing on the implications of fees on imported oil. As I said when I made that request on January 22, I believe that we will all benefit from public testimony as to the advisability of imposing an oil import fee, and the effect that such a fee would have on both the domestic petroleum supply situation and on the world oil market.

I cannot help but remark on how dramatically the world oil market has changed in just three short months. During the first week in January, spot prices for West Texas Intermediate crude were $26.00 a bareel. Earlier this month, the domestic crude bottomed out at $11.49 per barrel -- at least I hope it bottomed out at that price. This week the price is hovering around $13.20 a barrel which is still about half its price at the beginning of the year.

Average prices have plummeted as well. According to DOE, the average world price was $27.10 per barrel as of January 1, 1986; it was $15.61 the end of the first week in March. U.S. prices had fallen even further, from $25.64 the first of the year, to $13.89 earlier this month.

Indeed, the dramatic events that have unfolded since Saudi Arabia stopped playing "swing producer" and started playing "follow the leader" have wiped out the oil price gains made following the 1979 OPEC price increase, and nearly obliterated the price gains since 1973.

I am here to tell you that the impact of those price changes is devastating in my state. We're not in a recession; we're in a very severe depression. The end is not in sight, and a solution to our problems does not appear to be within our grasp.

Louisiana has this Nation's second highest unemployment rate. The oil and gas extracton business employed 94,300 people in my State in 1981. That figure now stands at 75,500 people. And we could lose another 10,500 jobs by the end of the year if the price stays near $15 a barrel. The job losses ripple through our State's economy; I understand that an additional 40,000 non-oil jobs could be lost by the end of 1986 unless we see an upturn in oil prices.

The State is in dire financial shape. Louisiana expected to get 21.5% of its State budget from mineral revenues in 1986; we used to get 40%. Even using those low projections, if State agencies were appropriated the same amount of money they spent last fiscal year, the revenue shortfall will be between $550 and $660 million.

I could go on and on about our plight, but that is not my purpose here. That would be too depressing. I am looking for an understanding of our problems and, hopefully, a solution to those problems as well.

It is easy for those who are not from oil producing states to dismiss our plight, saying that we had our glory days in the 70's and early 80's and now it's time for us to pay. But that point of view fails to comprehend that energy woes are everyone's woes, just as budget woes are everyone's woes. We simply must do something about them.

I hope that today's testimony will offer some concrete, long-range ideas about how we should deal with both the energy industry's problems, and our massive budget problems.

I know that imposition of an oil import fee would be painful, and would wipe out some of the macroeconomic benefits of the oil price decline. But those who eschew an oil import fee must understand the magnitude of our plight. They must also understand that if they ignore the energy industry's problems, they will have their own problems in the months and years ahead as our domestic production drops, our trade imbalance deepens, and we once again become dependent upon insecure areas of the world for one of our Nation's most basic commodities.

Senator NICKLES. Senator Evans.

## STATEMENT OF HON. DANIEL J. EVANS, A U.S. SENATOR FROM THE STATE OF WASHINGTON

Senator EVANS. Thank you, very much, Mr. Chairman. Let me first associate myself with the remarks of the chairman and ranking member, but to add to it, we, as a State, and as a region of the country, did not benefit from the rise in oil prices, because we are not an oil producer. We probably, at least temporarily, find the pleasure of dropping oil prices because there is no immediate economic disaster which visits us as a result of these prices, and perhaps and most explicitly pointed out to me not long ago when I had a phone call from my son, who stated with pride that he finally put $10 worth of gas in the car and got more than 10 gallons. That was sort of a measuring point when gasoline dropped below $1 a gallon.

I think regardless of whether you come from an oil patch State, or from a consuming State, this is a national problem, it ought to be viewed as a national problem. Continuation of the current artificial depression of prices, and I couldn't agree more with the Senator from Louisiana, that this is not a free market, is going to have the end result of stoppage of effective conservation efforts. It is going to slow down the movement toward more efficient use of energy in our country; research and development into alternative energy sources will suffer, and I might add here that the administration already—and I think unwisely—has drastically cut back and shortchanged energy research and development; stripper wells will close and many of them never to reopen again; exploration will be reduced and we will find ourselves very shortly back at the mercy of those who would jerk us around from overseas in terms of oil supply and oil prices.

It all adds up, if we do nothing, to an erratic, inadequate energy policy of this Nation, and I, for one, Mr. Chairman, will listen with great interest to what might be suggested today by various witnesses as proposed answers—better on a more comprehensive policy proposal, which I believe may well have to originate in Congress and may well have to originate in this committee, because I don't think there is any sign whatsoever that the administration is going to step forward and offer any kind of solution to this growing crisis.

Senator NICKLES. Senator Evans, thank you very much for your comments.

Senator JOHNSTON. Mr. Chairman.

Senator NICKLES. Senator?

Senator JOHNSTON. Senator Rockefeller had a dental emergency this morning. He hopes to make it to the hearing, but in any event, will submit questions for the record.

Senator NICKLES. Certainly. Our first panel, we have a distinguished list of panelists. We have Ted Burtis, who is chairman of the board of Sun Oil Co.

Mr. Burtis.

Mr. BURTIS. Thank you, Mr. Chairman. I have submitted written testimony which, of course, I will not read.

Senator NICKLES. Thank you. Before you start, I am going to ask all the panelists, if you would, we will submit your statements for the record, and if you would summarize your statements, that would give us a better chance for dialog. We would also ask our panelists, if they could, we have three panels and we did get started an hour late and we do have some legislation on the floor. So, if we can try and keep our remarks around the 5 or 7 minute timeframe, I think that would make it possible to hear everybody out this morning.

Please proceed.

## STATEMENT OF THEODORE A. BURTIS, CHAIRMAN OF THE BOARD OF SUN CO., INC.

Mr. BURTIS. Thank you. I will be brief. Mr. Chairman, 1 week from today, the company I work for will celebrate its centennial as a successful energy company in the United States. We are thankful to have had the privilege of working for 100 years under our free enterprise system, and so I am really here today to encourage the committee to help keep the future of this Nation's energy to stay both free and enterprising.

I might suggest two things. One is that we resist the short-range temptation of an oil import tax and that you take it off the agenda. Second, I would urge that this committee particularly take the lead to rally our national energy purpose behind a sound policy that is designed not just for the next quarter, but for the next generation.

Now, as appealing as the prospect of an oil import fee may be for the shortrun as a revenue raiser and as understandably as it may be for a good many of our colleagues who are under great financial stress, we, at the Sun Co., are opposed to it because we believe it is not in the best interest of the country.

For those of us who are in the industry, it is good to remind ourselves that if we applaud the market system when it is working our way, but then turn to Government to prop us up when the wind blows against us, I think we are in for a lot of sleepless nights and some rather creative explanations to our shareholders.

An oil import tax is wrong because it would have generally a negative impact on the economy. It would put the U.S. manufacturing industry at a competitive disadvantage, both home and abroad, and very likely increase interest rates and unemployment. Once again, I think we are in the danger of our wisdom in avoiding crisis being exceeded only by our folly in promoting it.

An oil import tax is wrong because it would put still another burden on an already heavily taxed industry and I have no question that we would end up paying a considerable part of it. It is the adoption of sort of a trampoline tax philosophy, taxing oil when it goes up and then taxing it again on the way down. You know, the more you run over a dead cat, the flatter it gets.

An oil import tax is wrong because it relies, one more time, on some political patchwork. We ought to recognize by now that relying on political decisions to protect our interest when we philosophically believe in the market system, is a pretty risky proposition. When we, in the energy industry, tie ourselves too closely to political remedies, instead of relying on our own business leadership, we forget where we came from and we put both the risks and the returns of our enterprise into the hands of others.

Our experience with the OPEC, or the exporting countries generally, with $30 oil, reduced to $15 oil in 60 days, should make it pretty clear that what a political entity gives it can also take away. When you dance with a grizzly bear, he is going to lead.

Instead of a temporary tax transplant, our real concern ought to be for a long-range energy policy that will strengthen the energy security of this country. It is more fundamental than budget compromises, it is more important than regional interests and it is a lot more enduring than short term windfalls for the Treasury.

There are a lot of ways to raise money, but there is only one way to produce energy in this country. We need to assure this industry of a climate favorable to doing its work. The way to improve our energy supply and our bargaining position, vis-a-vis, the exporting nations, is to free up our own private industry.

The reality of the U.S. response to the oil price decline of the past 2 months is detailed in the written testimony and it has been played out with very high visibility in the newspapers and on the 6 o'clock news. Capital budgets of oil companies have been reduced, domestic drilling has been cut, people are laid off, producing wells shut in, dividends passed.

Most of all, the momentum for the search for new oil has been curtailed, again, as mentioned, escalating the probability of increasing our dependence on foreign oil. The consequences of such a choice should have been learned 13 years ago, and that calls for a national energy policy; a policy that doesn't add new taxes to the oil industry, a policy that opens up new areas, onshore and offshore for exploration, while maintaining the balance which is perfectly possible between environmental protection and energy common sense, and a policy that doesn't saddle this industry with a disproportionate share of the superfund, and a policy that recognizes that the long-range energy interests of this country are best served if this industry operates with private freedom rather than with public constraint.

Mr. Chairman, reality says that the industry-Government partnership is going to continue for a long time, but if we are going to chart our country's energy future, we need to reduce some of the obstacles in that relationship. We are currently experiencing in this business a textbook example of supply and demand at work.

The two of them are not walking hand in hand right now, but I would urge you and the committee to let supply and demand work it out. Let's avoid another kind of supply and demand problem, the trap of getting ourselves permanently over-supplied with energy taxes and disincentives. To do this is to run scared, not prepared.

The country was not build on fear, it was built on courage and confidence and a determination to do the job at hand, and I would suggest that there is a renewed need for just those characteristics, and for starters, they have to come both from your world and from ours.

Thank you.

[The prepared statement of Mr. Burtis follows:]

# OIL IMPORT RESTRICTIONS
# AND
# THE U.S. ENERGY POLICY

Statement presented to the
Energy and Natural Resources Committee
of the
U.S. Senate

By
Theodore A. Burtis, Chairman
Sun Company, Inc.

March 20, 1986

Mr. Chairman, I welcome this invitation to present this statement of concern about our national energy circumstances to this committee. The opportunity to express my views as a citizen and as a businessman is a uniquely American privilege and one that neither I nor my company take for granted.

It is a popular pursuit for people to come to Washington and announce that they bring only facts and do not represent any special interests. I am not one of them, for it should be clearly understood that I do represent several special interests:

— the interests of the company I work for which has been a part of America's economic and social structure for 100 years;

— the interests of the energy industry which I consider crucial to this nation's future;

— the interests of the country I love which deserves the very best preparation, prosperity and protection possible in the years ahead.

For the third time in 13 years our nation's energy climate and its economy are being severely impacted from outside our shores. In 1973 and 1979 political decisions of Middle East oil producers diminished oil supplies and escalated prices. Now we have the reverse of that with unrestricted production going on among producing nations, and the attendant plunge in prices with its mixed blessings---a stronger total United States economy accompanied by serious problems for America's energy future.

Before this statement is over, I will suggest three things to this committee:

— THAT no national energy policy is an energy policy, and one that puts us at a disadvantage in dealing with exporting nations.

— THAT consideration of yet another tax, an oil import fee, is a continuation of a bad habit of using the energy industry as a funding vehicle for the governmental agenda.

— THAT this committee is in the right position at the right time to provide some national guidance that will take us into the 21st century with a sense of energy purpose instead of a feeling that we are once again drifting and dreaming.

The evolution of regulatory, environmental and revenue actions has created an uneasy and unsought alliance between government and industry. It has seldom been a warm, friendly partnership stimulated by a common goal. It is a situation that is not right. And it is not wrong. But it is real. It exists, and too often in an adversarial atmosphere.

If we are going to work together to give America a common sense energy future, the time to begin that cooperation has once again presented itself. In our zeal to generate institutional checks and balances in our system, we are handicapping ourselves with an oversupply of checks, and are paying too little attention to a balanced approach to our energy problems.

One week from today, the company I work for will celebrate its centennial as a successful energy company in the United States. We are thankful for the privilege of working for 100 years under America's free enterprise system, and I want to encourage this committee to help keep the future of this nation's energy industry both free, and enterprising.

Some wounds, both external and self-inflicted, threaten that future.

## STATE OF THE DOMESTIC OIL INDUSTRY

It is clear to all who read the newspapers and trade journals what is happening within the domestic crude oil exploration and production industry. Headlines tell the story of shut-in wells, bankrupt service companies, idle rotary drilling rigs, idle seismic equipment and surplus crews, curtailment in capital expenditures, and production decline projections of one million barrels a day of U.S. crude oil if the price remains in the low double digit range for any length of time.

A direct indication of the degree of activity in this industry is shown in the Hughes Tool Company update of U.S. Rotary Rig Count. Reports of weekly decline have recently exceeded 100 per week. Authoritative industry sources estimate that 1986 active rig count will fall below 800---less than the previous 50 year low achieved in 1970.

No one knows what will happen but the certainty is that the longer prices remain $15/barrel or under, the greater the permanent decline in U.S. production capacity and the longer it will take to "retool" the industry to regain the rapidly disappearing domestic exploration and development resources---both human and equipment.

The lesson of all this is that the oil exploration system slows down much more rapidly than it heats up. Without the resources to pursue exploration, a company's capability dissipates rapidly. It takes little neglect for a company to end up with a poor land position, limited prospects and a need to catch up in technology.

Technology itself becomes an early casualty of industry cutbacks and yet it is U.S. drilling technology that sets the pace for the world. Already we are seeing symptoms of a decline in emphasis on technological development simply by looking at the drop in the numbers of technical people being turned out by our colleges.

Enrollment in petroleum engineering courses reflects the impact of a downturn in drilling over the past 4 years. Our current freefall of activity will only accelerate that decline.

As a nation we have put ourselves in a ricochet position, with little control over the bad bounces we may get from foreign suppliers. As the world's No. 1 consumer, we are forced to buy one-third of our oil from outside the country. We are uncomfortable with a supply and price history that is out of our hands.

OPEC's 1979 production had reached 32 million barrels daily, essentially peak capacity. With the rest of the world also at capacity, world oil prices peaked at $40/bbl as consumer panic bid prices up. It was only the moderating influence of Saudi Arabia that leveled prices first at $34 then $29/bbl.

Over the 1980-84 period, market forces (energy conservation/efficiency investments plus a surge in new energy supply activity) combined to end OPEC's dominance and create a growing surplus of crude oil. By the end of 1984, both world production and refining spare capacities exceeded 10 million barrels daily, more than 20%. OPEC was producing only 17 million barrels daily. The combination of significantly reduced world demand and the growing oil output of non-OPEC nations was squeezing OPEC.

By use of production quotas, official prices and extreme Saudi production restraint, OPEC managed to keep world markets fairly stable. However, in late 1985, OPEC discipline failed as the Saudis decided that they would no longer act as swing producer. The Saudis abandoned official prices in favor of netback pricing and doubled their production to over 4 million barrels daily, more than the market could absorb.

Now, oil prices are in a freefall possibly heading toward single digits. However, due to the long lead times for energy investments (on both supply and demand side) a rebalance of supply and demand won't be evident immediately. It could take 4-10 years for markets to react to current events, unless OPEC or some equivalent of OPEC acts to restrain demand.

The low prices currently enjoyed by the consuming nations are a result of the oversupply of crude oil in the world market. That oversupply will last only as long as the major oil exporting countries want it to last, or until demand catches up with supply at which time world prices will rise to some new level determined by interests beyond the borders of this nation. How the United States reacts to the current situation will have considerable bearing on the impact of future price increases and supply disruptions on the U.S. economy.

This nation has always been comfortable with having its destiny become a matter of choice, not a matter of chance. In energy matters, we need some action now to salvage as much choice as possible.

## NEEDED: A NATIONAL ENERGY POLICY

If our call for a national energy policy has a certain echo quality to it, the reason is that those who regularly look beyond the next quarter to the next generation have recognized for some time that energy has always been essential to America's growth. The difference in the past and the future does not deal with need, it deals with supply. Our plentiful domestic sources of the past continue to slip away, but our future needs will not go away.

There is no way to free this nation from dependence on such a vital commodity but it is possible to reduce our vulnerability to the sometimes roller coaster swings in supply. Our only defense is a national strategy that defines clearly our objectives and how they might be achieved.

The deliberations of this committee can set the stage for formulation of a consistent energy policy aimed at providing this nation with low cost, reliable sources of energy. To make that happen, consider, please, ten steps:

1. A national energy policy established by the Energy Committees of the House and Senate and administered by the Secretary of Energy rather than an energy policy that evolves due to actions of the Treasury and the Finance or Ways and Means Committees.

2. Clear, public communication of the impact of this problem and the supply/price relationship. With radio, television, the print media and a full Fall of campaign platforms available, the common sense communication of our energy reality should be a part of the public agenda.

3. Maintain the strategic petroleum reserve along with a clear resolve to use it when outside interests threaten our economic stability through temporary crude oil pricing or production policies. The size of the SPR should be increased now because of the decrease in domestic crude production and to permit an enhanced draw-down capability.

4. Eliminate the crude oil windfall profits tax. This excise tax is a disincentive to the future production of certain classes of crude oil. Since there is no tax credit while prices are down, there should be no excise tax if prices rise again. This industry must be allowed to operate on real economics, to work in the best interest of the nation.

5. Repeal the Fuel Use Act and Incremental Pricing under NGPA. Energy requires no end use or price controls to direct consumption. The free market works efficiently if permitted to do so. These laws were ill-conceived and are now outdated and totally unnecessary.

6. Broaden the base for Superfund Taxes. The Senate Superfund financing provides for a broad-based excise tax that properly recognizes that the cause and thus the burden for waste site cleanup extends across all industry. The House version disproportionately burdens the oil and chemical industry. Place the tax burden on broader shoulders where it properly belongs.

7. Lease the best lands first. When offering government lands for energy development, lease the best areas first. Provide the most promising opportunities to encourage bidding in order to maintain the needed skills and resources active in the industry. It is long past time that energy and environmental camps stopped their open combat. A policy of protecting the environment is pefectly compatible with one that also assures our energy future.

8. Retain current incentives for investment. Now is not the time to eliminate incentives for capital investments such as ITC and IDC, or to impose new minimum taxes. Any so-called tax reform should be set aside in favor of spending reductions and the additional revenues brought about by lower energy prices.

9. Permit U.S. crude oil exports including that from the Alaskan North Slope to increase incentives to find and produce West Coast crude oil. In considering this action, recognize also the impact this will have on our Jones Act fleet.

10. Deregulate natural gas prices. Current falling energy prices provide an opportunity to deregulate with no real market impact and to set the stage for additional old gas recovery which will add to this nation's energy security.

These are some, not all, of the steps that should be considered to boldly send a message to this nation, and beyond, that the United States has no intention of having its energy future managed from another land.

OIL IMPORT FEES OR QUOTAS

In recent weeks oil import fees have been suggested as a means to achieve deficit reductions or as a vehicle for providing funds to create revenue neutral tax reform or as a measure to promote national energy security as well as save the energy laden financial institutions and shore up energy state general funds.

I urge you to resist the short-range temptation of an oil import tax and remove the consideration of it from America's agenda.

Petroleum should be acknowledged as a commodity vital to the energy needs of the nation rather than as a source of revenue for whatever special interest program may lack funds, or worse, for all these special programs aimed at deficit reduction or tax reform.

As appealing as the prospect of an oil import fee may be for the short run, and as well-intentioned as it may be among some of our colleagues, we at the Sun Company are opposed to it, because it is not in the best interests of the country.

For those of us in the industry it is good to remind ourselves that if we applaud the free market system when it's working our way, but turn to government to prop us up when the wind blows against us, I think we're in for a lot of sleepless nights and creative explanations to shareholders.

— An oil import tax is wrong because it would have a negative impact on the economy, put the U.S. manufacturing industry at a competitive disadvantage, and increase both interest rates and unemployment. Once again, we are in danger of our wisdom in avoiding crisis being exceeded by our folly in promoting it.

— An oil import tax is wrong because it would put yet another burden on an already heavily taxed industry. It is an adoption of a trampoline tax philosophy, taxing oil when the price goes up, and taxing it again on the way down. The more you run over a dead cat, the flatter it gets.

— An oil import tax is wrong because it relies, one more time, on political patchwork. We should recognize by now that relying on political decisions to protect our interests when we philosophically believe in free markets, is a risky proposition. When we in the energy industry tie ourselves too closely to political remedies instead of turning to our own business leadership we forget where we came from and we put both the risks and returns of our enterprise into the hands of others. Our experience with OPEC and $28 oil reduced to $10 oil in 60 days should make it clear that what a political entity gives, it can also take away. When you dance with a grizzily bear, you better let him lead.

Explaining these points further:

— U.S. manufacturers would suffer in both domestic and world markets. This could add to the current trade deficit and further impair the ability of U.S. manufcturers to compete.

— Economic activity (GNP) would be reduced which will, in combination with non-competitive manufacturing, result in increased unemployment. A 1% increase in unemployment costs the U.S. Treasury $25 billion.

— Inflation and interest rates would be higher. A 1% increase in interest rates costs the U.S. Treasury $20 bllion plus an increase in cost of living adjustments.

Some domestic oil producers might be expected to favor an import fee on foreign crude oil with the expectation that this would result in higher prices for domestic production and thus prevent the shut-in of some marginal production. There is nothing in the recent behavior of Congress to believe they would allow domestic producers to keep any benefit from an import fee without extracting a price for that protection when prices recover. If an additional tax were extended to domestic oil as well, there would be no positive effect for domestic oil exploration and production.

The most significant factors in the consideration of an import fee regardless of the reason for which it is imposed are the negative impact on the U.S. economy and thus very damaging political effects for the U.S. Government.

Other domestic and foreign liabilities could also develop.

— A tax on petroleum singles out petroleum users as the revenue source. This results in a flow of money from the oil consuming states in the Northeast to the producing states. Certainly there will be requests for some accommodation by the consuming states.

— Import fees would be a significant departure from the nation's free trade positions and will lead to increased pressure from other industries, even though the motive is financial rather than protectionist. There will likewise be requests from Canada, Mexico, and other Western Hemisphere nations for exemption.

For so many reasons, import fees on petroleum for any purpose is unsound national policy. There is ample evidence that artificial incentives and disincentives are not productive.

Likewise, crude oil or product quotas which attempt to insulate the United States from the effects of actions in the world around us would have the same damaging impact on the U.S. economy to the extent that they were effective in artifically increasing domestic prices. In addition, quotas are extremely complex to administer and set properly.

## SOME CLOSING THOUGHTS

Today, in March of 1986, the domestic oil industry is a vastly different industry from that of just 90 days ago.

A healthy domestic petroleum industry is a relative matter. Certainly it's not the same today as it was only last year. For a world-commodity dominated by interests outside of the United States, this industry is necessarily affected by the uncertainties of outside forces. We need to work together to minimize those uncertainties.

Reality says the government/industry partnership will continue for a long time to come, but to chart our country's future energy direction, we need to cut down on the obstacles in that relationship.

We are currently experiencing in this business a textbook example of supply and demand at work. The two of them are not walking hand-in-hand right now, and I urge you and the committee to let supply and demand work it out themselves. Let's avoid another kind of supply and demand problem---the trap of getting ourselves permanently oversupplied with energy taxes and disincentives. To do this is to run scared, instead of prepared.

America was not built on fear. It was built on courage and confidence, and on an unbeatable determination to do the job at hand. I suggest that there is a renewed demand for that combination of characteristics and for starters, the supply of them has to come from your world and ours.

I have tried to keep this statement simple and relatively unemotional. I believe I have succeeded on the first count and failed on the second, for it is difficult for me representing a company that has devoted a century of effort to energy development to be content with a drifting and dreaming approach to a most critical problem.

I urge this committee, with its insight and influence, to exercise a firm hand in pointing this nation toward a more competent and confident energy direction. For all of us, further delays or detours in this mission will be an excuse that neither history nor our children will understand.

For a long time I have urged that we avoid the trap of being "hope junkies" for they are people whose approach to this problem is to say: "I hope it all turns out okay." "I hope OPEC will be kind to us." "I hope we'll find some more oil here at home."

My conviction is that amateurs hope, and professionals work.

Mr. Chairman, I pledge to you that our professionals at Sun Company are ready to share their information and skill with your professionals. It's a beginning, and we should get on with it.

Thank you.

Senator NICKLES. Mr. Burtis, thank you, very much.

Senator Ford, did you have any opening comments?

Senator FORD. No, thank you.

Senator NICKLES. Senator Hecht.

## STATEMENT OF HON. CHIC HECHT, A U.S. SENATOR FROM THE STATE OF NEVADA

Senator HECHT. Yes, a very short one. Thank you, Mr. Chairman. I am looking forward to the opportunity this morning to hear from some of the people who are most directly affected by the recent dramatic changes in the oil markets and who would be most directly affected by the recent dramatic changes in the oil markets, and who would be most affected by an oil import fee.

I personally do not believe that an oil import fee is the solution to the problem faced by the domestic oil industry. Instead, we need to provide encouragement to the industry. This is one reason, Mr. Chairman, that you and I joined with Senator McClure a couple of days ago in introducing a bill to repeal the windfall profits tax. I am examining other ways that Congress can use the tax laws to give necessary assistance to the oil industry.

I think this is a most productive approach, instead of increasing consumer costs through an oil import fee. Thank you, Mr. Chairman.

Senator NICKLES. Thank you, Senator Hecht. We appreciate your cosponsoring legislation, and also your attendance today.

Mr. Hartley.

## STATEMENT OF FRED L. HARTLEY, CHAIRMAN AND CHIEF EXECUTIVE OFFICER, UNOCAL CORP.

Mr. HARTLEY. Good morning, Mr. Chairman. It seems interesting that about a year ago I was fighting the barbarians of Wall Street in defense of our company, and now I am involved in a predatory attack against not only my own company, but the entire U. S. industry on the part of the nations of the Persian Gulf, at least those with Arabic tendencies.

America is once again in an energy war. This is the third in 13 years. Each has brought instability and turmoil. This one, in a perverse way, could be the worse yet. The first two, which was the 1973-74 period, and the 1979-80 period, were short-term wars of shortage caused by an embargo and a revolution. From those painful crises, we learned how to use less energy, how to find new sources of oil and other kinds of energy, how to get more oil out of the old depleting fields, and how in time, to sharply cut our oil imports, all due to the credit and ingenuity of our industry and, I think, the care and feeding provided by appropriate legislation during that time period.

The first two crises raised questions about our ability to control our own foreign and domestic policy, and it led to a modest security oil storage program and to a brief effort to stimulate synthetic fuels development. Incredibly, America seems to have already forgotten the pain and threats of those two earlier crises.

This new war is different and potentially more dangerous. Instead of beginning with a warning shot, a supply cutoff, or doubled oil prices, it began with the offer of a modern-day Trojan Horse, and just as the gullible recipients did 3,000 years ago, the Nation is cheering as we dismantle our own defenses to make way for the gift.

This new Trojan Horse comes packaged as lower oil prices and increased OPEC supply. In return for a short-term boost to our economy and lower gas and heating oil prices, we are happily willing to become more vulnerable than ever before.

All this is not good news, as the stock market seems to think. In reality, it is camouflage for world-scale predatory price cutting and a war of attrition. In less than 90 days, the combination of Saudi Arabia's production increases and their so-called netback pricing deals have brought on a full scale crude oil price war. Key oil prices have fallen by 50 percent or more and Saudi oil and product imports into the United States have jumped from 27,000 barrels per day last September, to 642,000 per day in December, the latest month's figures which I could get my hands on.

Saudi Arabia now seems to be the only major oil producer that is looking at energy in a strategic sense. The Saudis have quit being the world's oil market "balancer" and are moving aggressively to regain lost market share. Their announced goal is to restore OPEC's power in the world market and their own power in OPEC; and they seem prepared to sacrifice even their OPEC partners' short-run interests to attain that goal. Probably, of course, this has something to do with the politics of their relations with Iran. You can do a pretty good job of hurting Iran by having a price war at the same time they are trying to fight a war.

The Saudis certainly have the firepower to back up their aggressive market share strategy. They have one-quarter of the world's known crude oil reserves, virtually all of its excess production capacity, and the world's lowest exploration, development, and production costs. They can quickly increase production to 10 million barrels per day; they can afford to cut prices to $10 or less per barrel and they can stay at those levels until higher cost producers are forced to shut down.

In America, at least, this tactic is bringing pleasure to consumers, to Government economists and to other short-sighted seers.

It is also bringing enormous pain, perhaps even mortal pain, to most of America's domestic oil producers. In a relatively short time, if left unchecked, this blitzkrieg will boost demand, slash domestic production, and destroy many U.S. oil companies, thus increasing the power of the few survivors, within our own country, and of OPEC.

I certainly agree, Senator Johnston, wholeheartedly with your opening comments. As far as I am concerned, you are right on the money and telling it just exactly as it is.

Most importantly, it will sharply increase oil imports and set up America for yet another war of shortage, a war that we will be woefully prepared to deal with, to the detriment of our economy and our national security. In the first shortage, spot oil went to $20 a barrel; in the second it went to $40; in the next, it could well go to $80.

What can we do? The answer should be obvious: We can quickly neutralize this predatory price cutting with a flexibile security oil import fee. I agree with you, Senator Johnston, this business of talking about a free market is rubbish. This is absolutely a controlled market and has been in all the years I have been in the oil industry, and that is 47 years as of the 18th of May coming up.

If imported oil prices go down, the fee goes up, taking the total to, say, the 1985 more or less average price level of about $27 a barrel. On the other hand, if the prices go up, and the Saudis take their foot off our throats, the fee would go down, and of course, phase out to nothing again when we get back up to $27. If instituted quickly, this fee would have a minimum impact on the economy since it would restore oil prices to levels of only 3 months ago. Our Nation needs the money, heaven knows that, and our industry needs the stability.

Please let me assure you that it has not been easy for Unocal to adopt such a position. We firmly believe that the free market, for the best that you can have a free market in America today, best serves the interests of all consumers, businesses, and governments. But this is not the free market at work. The Saudi action must be viewed and recognized for what it is: predatory pricing of an essential strategic commodity on a scale and for goals previously unheard of. America is being set up for a third energy crisis and another price explosion.

Let's try to put some numbers on the future possibilities. Consider two scenarios; one, with oil at $27 a barrel, and the other at half that, $13.50. That is about where we are today, gentlemen. Those approximate last year's prices and the current ones. At $27, domestic oil production, currently about 9 million barrels per day, declines slowly to about 8.5 million barrels by 1990. Another 1.5 million barrels per day of natural gas liquids, follow the same decline rate, dropping to about 1.3 million barrels per day by about 1990.

Consumption rises to about 16 million barrels per day, there will be a growth in consumption during this period, but very minimal, and imports will grow to 6 million per day from the current 3.5 to 4 million per day.

Those trends would be expected to continue through the end of this century. At $13.50, events are radically and chillingly different.

First, most domestic enhanced oil recovery production stops, as do all future enhanced oil recovery projects. Since current enhanced oil recovery production is about 650,000 per day, and EOR was projected to recover and provide about 25 percent of all future production from reserve replacement, between now and the end of the century, this is a major loss, both immediately and in the future.

Next, stripper oil wells start being shut in, and of course, that is already going on. In combination, stripper and EOR losses give a total first year loss, the end of this year, of some 1 million barrels per day. By 1988, we will start to feel the production effect of today's curtailment in exploration and production activities.

We believe that at $13.50, the drop in production will accelerate so that by 1990, production would fall to 6 or 6.5 million barrels per day.

There would, of course, also be greater increases in demand at the lower price. We now expect an additional 200,000 barrels or more of daily demand this year, with total demand rising to 17-18 million barrels per day by 1990, instead of the 16 million barrels per day that was previously projected at the $27 scenario.

With these price changes, 1990's demand would be higher by 1 to 2 million per day, and domestic supply lower by 1.5 to 2 million barrels per day. Extra imports would have to make up the difference, which means that instead of relying on imports for 35 to 40 percent of our total supply, under the $27 scenario, we could well be at an all-time high level of between 9 to 10 million barrels per day, or about 60 percent of our total U.S. requirements.

Again, OPEC would be firmly in control. Most of the increased imports would be from Saudi Arabia, and prices, no doubt, would be very different. This is not something for this Nation to look forward to, but I am afraid that we are heading that way.

I had expected OPEC to regain control of the world markets in the 1990's, but with today's low prices, it will certainly happen sooner, and probably abruptly. Since we have already made all the easy conservation moves, we will be in worse shape to deal with sharp price increases and the threat of supply interruptions than we were in 1973, or 1979. Our 500 million barrel security storage would last only a few weeks, a woefully inadequate barricade against the power of a born-again OPEC.

It is my belief that any time OPEC wants to, it will be able to return to 1985 price levels of about $27, and much higher if it mandates. We had a reference to a bear here this morning. I agree; a grizzly sleeps anywhere it wants to, and where does OPEC put the price level: anywhere it wishes to once it gets the situation back under control again, and that they will do for the reasons I have given you.

Of course, in addition, they will have greatly enhanced their overall market power.

A properly structured import fee would provide a floor price for domestic crude oil at a level necessary to ensure long-term development of our energy reserves, an essential part of out national security. To avoid a flood of product imports, it obviously must also provide a differential for product imports to protect the Nation's refining industry.

To repeat what I have said earlier, OPEC's aim has never been for a free market, nor is it now. Their present goal is to stimulate demand growth and to force others to cut back on exploration and development and to reduce production until OPEC is restored to price and supply dominance. An import fee can help prevent that an help move our Nation toward long-term stability that will benefit everyone by providing reliable sources of supply at somewhat consistent prices.

The alternative is a life of wild price swings and cycles of energy surplus and shortage. We must not allow that to happen.

In formulating national defense plans and policies, this country has always prepared for likely eventualities. Today's situation has a strong parallel. Oil is a strategic commodity. If the Government fools itself into believing that the current OPEC price war is the free market in operation, we will be laying ourselves open to disaster.

If the Russians controlled the Saudi oil and were doing the predatory pricing, everyone would quickly recognize the danger and would race to act, because of our paranoid attitude in that area these days. We must act now with the same urgency because the damage will be as great no matter who inflicts it, whether it be the Arabs, Russians, or anybody else.

Let me close with a few comments about some of the arguments that have been advanced by those who oppose an import fee. First, it is claimed that a fee will have a serious negative impact on the economy. To this, I would answer, if it is put into place promptly it might dampen some perspective gains, but since all this happened so quickly, a fee would not change the economic trends of last fall, which were considered to be pretty good in considering where the stock market went to during that phase, there is some confirmation of that.

Further, it must be recognized that all security insurance, including the cost of our defense budget, does have a cost. I do not believe the cost of an import fee is large, relative to the security and stability it would purchase. Second, it is claimed that a fee would interfere with a free market and put the Government back in the business of regulating the oil industry.

To this I would answer, what free market? When oil prices were decontrolled, the Government quickly taxed away most of the industry's gains with the so-called windfall profits tax. But, now with falling prices, we are told to stop complaining about the free market.

Make no mistake, oil prices are not free; they are a cartel-administered price. As to the regulatory issue, it is possible, if we have the political will, to impose a fee that is simply to understand and simple to administer.

Third, it is argued that an import fee is an overreaction to what is surely a short-term event. If oil prices had fallen by only 10 to 20 percent, I would agree—leave the situation alone. But what has happened now is far more serious. Prices have fallen by 50 percent or more. They could, if the Saudis desire, fall by 75 percent.

To these skeptics, I must ask, at what price levels would you take this new war seriously? Or, would my dear competitors think that they could still get along? Suppose it goes to $5 a barrel. Are they still going to be able to pay their bills and keep their employees on the payroll? What price level we could have in the future could be $10, $8, and it is now foretold or threatened by Yamani, or even $5.

What happens if you are wrong and this turns out to be a long-term war of attrition? Can the Nation afford the mistake?

Fourth, it is argued that encouraging America's oil production now with an import fee amounts to a policy of "drain America first." To this I would answer that if you make this argument, you fail to understand the fundamental principal of energy policy: In a crisis, it is not how much energy you have in theory, but how much you can produce and deliver.

Our oil is valuable to us as a strategic commodity only if it is readily available and that means that we need a going industry, not a shut-down industry, producing as much oil as is economically and technically possible.

Fifth, and finally, it is argued that the world's oil exporters are now a diverse group and that Saudi Arabia's kinds have lost their one-time dominance. Those who argue this are either naive or uninformed. The Saudis have the only real surplus oil production capacity of any significance and their position will do nothing but grow in importance as the North Sea and other non-OPEC oil reserves decline. There is simply nothing on the horizon to challenge the Saudi's preeminent position and we just adjust our energy policy to face up to that fact.

I might say that you can in no way improve conditions by changing the present regulations of the industry. I noticed when Professor Schlesinger was here the other day, he talked about increasing the amount of the depletion allowance. When you have your cashflow down to the point where you don't have any profits, you don't have to worry about a depletion allowance; there is nothing to deplete it against.

So, what is required is cash to get back to where we were, continue the job and that is going to take the kind of action that I am recommending to today.

It is a pleasure to be with you.

[The prepared statement of Mr. Hartley follows:]

# STATEMENT
# ON
# PROPOSED IMPORT FEES
# ON
# CRUDE OIL & PETROLEUM PRODUCTS

PRESENTED BY

FRED L. HARTLEY

CHAIRMAN & CHIEF EXECUTIVE OFFICER

UNOCAL CORPORATION

AND

UNION OIL COMPANY OF CALIFORNIA

SUBMITTED TO THE

U.S. SENATE ENERGY & NATURAL RESOURCES COMMITTEE

MARCH 20, 1986 WASHINGTON, D.C.

Mr. Chairman and members of the Subcommittee:

My name is Fred L. Hartley. I am Chairman and Chief Executive Officer of the Unocal Corporation and its primary operating subsidiary, Union Oil Company of California. I appreciate the opportunity to be here today to present Unocal's views on the current world oil situation and the issue of oil import fees.

America is once again in an energy war -- its third in 13 years. Each has brought instability and turmoil. This one, in a perverse way, could be the worst yet.

The first two (1973-74 and 1979-80) were short-term wars of shortage, caused by an embargo and a revolution. From those painful crises we learned how to use less energy, how to find new sources of oil and other kinds of energy, how to get more oil out of old depleting fields, and how, in time, to sharply cut our oil imports.

Those first two crises raised questions about our ability to control our own foreign and domestic policy, led to a modest security oil storage program and to a brief effort to stimulate synthetic fuels development. Incredibly, America seems to have already forgotten the pains and threats of those two earlier crises.

This new war is different, and potentially more dangerous. Instead of beginning with a warning shot, a supply cut-off or doubled oil prices, it began with the offer of a modern day Trojan Horse. And, just as the gullible recipients did three thousand years ago, the nation is cheering as we dismantle our own defenses to make way for the gift.

This new Trojan Horse comes packaged as lower oil prices and increased OPEC supply. In return for a short-term boost to our economy and lower gasoline and heating oil prices we're happily willing to become more vulnerable than ever before. All this is not good news, as the stock market seems to think. In reality it's camouflage for world-scale predatory price cutting and a war of attrition.

In less than 90 days the combination of Saudi Arabia's production increases and their so-called "netback" pricing deals have brought on a full-scale crude oil price war. Key oil prices have fallen by 50 percent or more, and Saudi oil and product imports into the U. S. have jumped from 27,000 barrels per day last September to 642,000 barrels per day in December (the latest month for which we have data).

Saudi Arabia now seems to be the only major oil producer that's looking at energy in a strategic sense. The Saudis have quit being the world's oil market "balancer" and are moving aggressively to regain lost market share. Their announced goal is to restore OPEC's power in the world market and their own power in OPEC; and they seem prepared to sacrifice even their OPEC partners' short-run interests to attain that goal.

The Saudis certainly have the firepower to back up their aggressive market share strategy. They have one-quarter of the world's known crude oil reserves, virtually all of its excess production capacity, and the world's lowest exploration, development and production costs. They can quickly increase production to 10 million barrels per day; they can afford to cut prices to $10 or less per barrel -- and they can stay at those levels until higher-cost producers are forced to shut down. In America, at least, this tactic is bringing pleasure to consumers, to government economists, and to other shortsighted seers.

It's also bringing enormous pain -- perhaps even mortal pain -- to most of America's domestic oil producers. In a relatively short time, if left unchecked, this blitzkrieg will boost demand, slash domestic production, and destroy many U. S. oil companies, thus increasing the power of the few survivors -- and of OPEC.

Most importantly, it will sharply increase oil imports and set up America for yet another war of shortage -- a war that we will be woefully prepared to deal with, to the detriment of our economy and our national security. In the first shortage, spot oil went to $20 a barrel; in the second it went to $40; in the next it could be $80.

What can we do? The answer should be obvious: We can quickly neutralize this predatory price cutting with a flexible security oil import fee. If imported oil prices go down, the fee goes up (taking the total to, say, the 1985 average price level of about $27 a barrel). On the other hand, if the prices go up, the fee goes down. If instituted quickly, this fee would have a minimum impact on the economy since it would restore oil prices to levels of only three months ago. Our nation needs the money and our industry needs the stability.

Please let me assure you that it has not been easy for Unocal to adopt such a position: We firmly believe that the free market best serves the interests of all consumers, businesses and governments. But this is not the free market at work. The Saudi action must be viewed and recognized for what it is: predatory pricing of an essential strategic commodity on a scale and for goals previously unheard of. America is being set up for a third energy crisis and another price explosion.

Let's consider what's happening. First -- as we read daily in the business press -- the low prices are forcing radical slashes in exploration and development budgets and activity around the world, and production economics are forcing cuts by high-cost producers, including U.S. stripper well operators.

Eventually, the argument goes, demand increases stimulated by lower prices will take up the slack and cause prices to increase again. That may be true; but before it happens, U.S. production will have dropped by a million or more barrels per day, and most exploration -- certainly all frontier exploration -- and the bulk of the enhanced recovery projects will be at a total halt.

Let's try to put some numbers on the future possibilities. Consider two scenarios: one with oil at $27 a barrel; the other at half that -- $13.50 a barrel. Those approximate last year's prices and the current ones.

At $27, domestic oil production, currently about 9 million barrels per day, declines slowly to about 8.5 million by 1990. Another 1.5 million barrels per day of natural gas liquids (NGLs), follow the same decline rate. Consumption rises to about 16 million barrels per day, and imports, about 6 million.

Those trends would be expected to continue through the end of the century, setting the stage for a gradual transition to an economy more heavily reliant on foreign imports. But that's irrelevant. Once OPEC regains its role as the major supplier to the world, the Saudis will again have the power to set prices at high levels and to keep their OPEC partners happy with their assigned production levels.

At $13.50, events are radically -- and chillingly -- different. First, most domestic enhanced oil recovery (EOR) production stops, as do all future EOR projects. Since current EOR production is about 650,000 barrels per day, and EOR was projected to provide about 25 percent of all future production from reserve replacement between now and the end of the century, this is a major loss, both immediately and in the future.

Next, stripper oil wells start being shut in. According to a recent study by the Interstate Oil Compact Commission, at $15, U. S. production would fall nearly 300 thousand barrels per day in the first year as 100,000 stripper wells would be plugged. At $10, 185,000 wells and some 600 thousand barrels per day of production would be lost. Future-year production losses would obviously be greater. In combination, stripper and EOR losses give a total first-year loss of some one million barrels per day.

By 1988 we will start to feel the production effect of today's abrupt curtailment in exploration and production activities. The number of U.S. drilling rigs in operation, after reaching a record high of 4,500 in 1981, is now at about a quarter that level -- and still falling rapidly. We believe that at $13.50 the drop in production will accelerate so that, by 1990, production would fall to 6 or 6 1/2 million barrels per day.

There would, of course, also be greater increases in demand at the lower price. We now expect an additional 200,000 barrels or more of daily demand this year, with total demand rising to 17-18 million barrels per day by 1990, instead of the 16 million barrels per day that was previously projected.

With these price changes, 1990's demand would be higher by one to two million barrels per day, and domestic supply lower by one and a half to two. Extra imports would have to make up the difference, which means that instead of relying on imports for 35-40 percent of our total supply, we could well be at all-time high levels -- 9 to 10 million barrels per day, or about 60 percent of the total.

Again, OPEC would be firmly in control, most of the increased imports would be from Saudi Arabia, and prices would no doubt be very different. This is not something for this nation to look forward to; but I'm afraid we are heading that way.

I had expected OPEC to regain control of world markets in the 1990's, but with today's low prices it will certainly happen sooner -- and probably abruptly. And since we have already made all the easy conservation moves, we will be in worse shape to deal with sharp price increases and the threat of supply interruptions than we were in 1973 or 1979. Our 500 million barrel security storage would last only a few weeks -- a woefully inadequate barricade against the power of a born-again OPEC.

It's my belief that any time OPEC wants to, it will be able to return to 1985 price levels of about $27 and much higher if it mandates. In addition, they will have greatly enhanced their overall market power.

An import fee imposed now should prevent that by restraining demand growth and by stimulating production and reserve replacement. A fee would help avoid the danger of sharp swings in price and supply -- and thereby maintain a greater degree of freedom and control over our own domestic and international policy. A fee is the best security insurance policy that I can think of.

In advocating an import fee, Unocal is not calling for market controls -- in fact we urge that any fee you consider should be simple and as free of controls and regulations as possible, and should include an automatic sunset provision to prevent its dragging on for years after its main purpose has been met.

A properly structured import fee would provide a floor price for domestic crude oil at a level necessary to ensure long-term development of our energy reserves -- an essential part of our national security. To avoid a flood of product imports, it obviously must also provide a differential for product imports to protect the nation's refining industry.

The greatest danger to any such fee system would be exemptions and exclusions. I recognize that no import fee can be implemented without creating some competitive distortions among producers, manufacturers, refiners, marketers, and consumers; but the most equitable fee is one with no exceptions. If we are to avoid a repeat of the decade-long mess that was the DOE entitlements program, we must not repeat the bad public policy of regulatory exemptions, corrections, and counter-corrections.

To repeat what I said earlier, OPEC's aim has never been for a free market, nor is it now. Their present goal is to stimulate demand growth and to force others to cut back on exploration and development and to reduce production until OPEC is restored to price and supply dominance. An import fee can help prevent that and help move our nation toward long term stability that will benefit everyone by providing reliable sources of supply at consistent prices. The alternative is a life of wild price swings and cycles of energy surplus and shortage. We must not allow that to happen.

In formulating national defense plans and policies, this country has always prepared for likely eventualities. We develop contingency plans, make long-term investments, put systems into place and maintain national defense readiness.

We try to do those things with cost effectiveness; we do not avoid or ignore them in the expectation that the free market will somehow make everything work out. We buy missile systems and nuclear weapons, for example, hoping we will never use them. But we still consider them to be wise and necessary investments in light of the alternatives.

Today's situation has a strong parallel. Oil is a strategic commodity. If the government fools itself into believing that the current OPEC price war is the free market in operation, we will be laying ourselves open to disaster.

In oil, as in national defense, the Congress and the administration must think strategically, not superficially. You must act on policy, not platitudes.

If the Russians controlled the Saudi oil and were doing the predatory pricing, everyone would quickly recognize the danger and would race to act. The danger is no less simply because the perpetrator is different. We must act now with the same urgency because the damage will be as great no matter who inflicts it.

Let me close with a few comments about some of the arguments that are being advanced by those who oppose an import fee.

First, it's claimed that a fee will have a serious negative impact on the economy. To this I would answer that if it's put into place promptly, it might dampen some prospective gains; but since all this has happened so quickly, a fee would not change the economic trends of last fall. Further, it must be recognized that all security insurance -- including the cost of our defense budget -- does have a cost. I do not believe the cost of an import fee is large relative to the security and stability it would purchase.

Second, it's claimed that a fee would interfere with the free market and put the government back in the business of regulating the oil industry. To this I would answer:

What free market? When oil prices were decontrolled, the government quickly taxed away most of the industry's gains with the so-called windfall profits tax. But now, with falling prices, we're told to stop complaining about the free market.

Further, for the U.S. oil industry to compete equally with the Saudis, we would need domestic reserves that could be produced for costs similar to those found in Saudi Arabia. Those costs depend more on where the oil is found than upon labor or technical considerations. Saudi reserves are many times the size of ours, and they know where those are; we in this country have to attempt to locate new reserves in frontier, offshore regions where conditions are considerably more hostile and where costs are considerably higher.

Yet Congress is working on so-called tax "reform" measures that would raise the oil industry's tax bill by billions of dollars at a time that industry revenues are dropping by several billions per year. And some members labor furiously to prevent oil leasing and exploration activities on the U.S. outer continental shelf. These and other short-sighted policies disrupt the free market, send the wrong signals to OPEC, and heighten the likelihood of their early success.

Make no mistake: oil prices are not "free", they are a cartel-administered price. As to the "regulatory" issue, it is possible -- if we have the political will -- to impose a fee that is simple to understand and simple to administer.

Third, it's argued that an import fee is an overreaction to what is surely a short-term event. If oil prices had fallen by only 10 to 20 percent, I would agree -- leave the situation alone. But what has happened is far more serious -- prices have fallen by 50 percent or more; they could, if the Saudis desire, fall by 75 percent. To these skeptics I must ask: At what price level would you take this new war seriously? $10? $8 (as now foretold -- or threatened -- by Yamani)? $5? And what happens if you're wrong, and this turns out to be a long-term war of attrition? Can the nation afford that mistake?

Fourth, it is argued that encouraging America's oil production now with an import fee amounts to a policy of "drain America first." To this I would answer that if you make this argument, you fail to understand a fundamental principle of energy policy: In a crisis, it's not how much energy you have in theory, but how much you can produce and deliver. Our oil is valuable to us as a strategic commodity only if it is readily available; and that means that we need a going industry -- not a shut down industry -- producing as much oil as is economically and technically possible.

Fifth, and finally, it's argued that the world's oil exporters are now a diverse group and that Saudi Arabia has lost its one-time dominance. Those who argue this are either naive or uninformed. The Saudis have the only real surplus oil production capacity of any significance, and their position will do nothing but grow in importance as the North Sea and other non-OPEC oil reserves decline. There's simply nothing on the horizon to challenge the Saudi's preeminent position, and we must adjust our energy policy to face up to that fact.

Thank you. I would be pleased to try to answer any questions you may have.

Senator **Nickles**. Thank you.

Senator Murkowski, did you have any opening comments?

Senator **Murkowski**. No, thank you. But I do want to commend you and the chairman for holding these hearings, and I was particularly interested in the last remark Mr. Hartley made because that was the bottom line of Secretary Schlesinger's recommendations to us; that we consider the depletion allowance, sliding oil, as an incentive and I gather it is Mr. Hartley's opinion that that is academic because you have no application of it. It would be interesting to hear the Secretary's reaction to your contention.

I am just curious to know whether he has a response to that.

Senator **Nickles**. Senator Bumpers, do you have any opening comments?

Senator **Bumpers**. No, thank you, Mr. Chairman.

Senator **Nickles**. Senator Bingaman?

Senator **Bingaman**. I do not, thank you.

Senator **Nickles**. Thank you very much.

The next panelist is Jack Graves, who is president of Calumet Oil Co., and president of Oklahoma Independent Petroleum Association.

## STATEMENT OF J.M. GRAVES, PRESIDENT, OKLAHOMA INDEPENDENT PETROLEUM ASSOCIATION

Mr. **Graves**. Good morning, Mr. Chairman and members of the committee. I am Jack Graves, president of the Oklahoma Independent Petroleum Association. Today I represent the 1,500 members of that association and we are grateful for this opportunity to be here.

Mr. Chairman, the question of an import fee on foreign crude oil and refined products is one of the most complex and troublesome issues the industry has faced for many years. It is also the most troublesome issue that our association has faced.

As you have heard, the petroleum industry is not united on either side of the issue, testimony, itself, to the complexity of the issue and the critical state of affairs in the domestic petroleum industry. As an association, OIPA wrestled with the issue for several months. We polled our membership and held several meetings, while at the same time, watching wellhead prices for crude oil plummet to levels that few of us ever expected to see again.

Our extensive efforts actually took us to a broader realization that the United States is like a sailboat on a windless day when it comes to energy policy. We have no direction and we have no momentum. We lack a comprehensive national energy policy to protect and promote the domestic petroleum industry and preserve national security.

The foreign control of the world oil market, rapidly falling prices for domestic oil and the incomprehensible efforts by many Congressmen to heap an additional tax burden on the petroleum industry, causes OIPA to believe that we need a national energy policy.

The domestic industry is drowning in the tranquil sea of complacency that exists today, but we also fear that such a fee would have far too many exceptions, burdensome paperwork and would lead to congressional action expanding it to a domestic tax. In other words, we feel we need a clean import fee as part of an effective energy policy.

The Energy Information Administration, which has been referred to earlier, is expecting incentives to reduce drilling resulting in a decline in U.S. production. Well, I can guarantee you, sir, that that is already happening. The independent segment of the industry is experiencing that very seriously.

The principal project of the domestic industry today is shutting in wells. A frighteningly accurate statement appeared in the Wall Street Journal this week. It says,

> We won't have the easy fixes of the 1970's. We will have no new North Sea. We will have no new Prudhoe Bay. There is not another Soviet Union over there as the world's largest producer, and the only Mexico is the one we have.

Well, what do we have? We have a one-time effort here to keep something that we probably don't realize the value is. That is, up to 1 million barrels a day of domestic production is at economic risk and we have a window of opportunity here to protect that 1 million a day. It can be protected and it can be retained for decades if we impose a clean import fee and we don't bless the domestic industry with a yoke that is called tax reform.

In our State, when posted wellhead prices dropped to $15 per barrel, we began abandoning what will eventually total an estimated 18,572 producing wells, out of the 100,000 wells that are in the State of Oklahoma; approximately 56,240 barrels of crude oil, out of the 430,000 that we produce will be shut in, will be abandoned, and never again be recoverable or producible. That, of course, equates to a gross loss of revenue of $307 million for the State of Oklahoma and the tax revenues of $21 million.

Before the prices fell to $15, we, in the Sooner State, already were suffering rising unemployment, a record number of bankruptcies and State budget shortfalls in excess of $465 million. Now, at $15 a barrel, we anticipate fully that 25 percent of the independent operators in Oklahoma will cease production and/or file bankruptcy and there will be an oil industrywide increase of unemployment of about 33 percent.

Last evening I reviewed the income and expense statements on 116 oil and gas leases that my company operates. Out of the 116 oil and gas leases, it was coincidental, but 58 of them were profitable and 58 of them were unprofitable, at $15 per barrel. I have reason to believe from talking with the other independents in the State that I am just about on a par as what they are, which probably means that up to half of the oil-producing properties in Oklahoma are, indeed, marginal, or uneconomic when the price hits $15 per barrel, which it already has.

If the posted price of crude oil drops to $10 a barrel, Oklahoma will lose an additional 15,000 wells, and an additional 70,000 barrels of crude oil daily. This would give us an estimated loss of 126,000 barrels of oil per day, and 33,000 wells abandoned for all time.

Mr. Chairman, there is a limit to the amount of money that this country can send overseas for foreign goods and commodities. We understand Congress' desire and the consuming public's need for the lowest possible prices, sometimes, though, regardless of the source of the raw materials or the finished product. But we all are misguided if we believe OPEC is flooding the market with crude and refined products because it has the best interests of the American consumer at heart.

To the contrary, OPEC intends to break the backs of the domestic oil and gas producers. They want those thousands of wells abandoned; they want that production to be lost forever, and in short, they want to be able to increase the amount of crude oil and refined products that they export to the United States, and the greater demand for their oil and their products will soon be accompanied by corresponding increase in prices paid by the consumer.

OIPA recognizes the Senate and administration's general tendency not to restrict or restrain imports, but these are desperate times which call for desperate yet effective measures which do involve national security. We think that there should be a fee on foreign crude oil and refined products. It would help guarantee that the domestic oil industry has a fair and equitable price and position in the marketplace.

We believe an import fee would help bring about stability which the industry desperately needs at this time. The fee, of course, as I have said, must be clean, with few exceptions, otherwise it will be a toothless tiger that the domestic oil industry will have to feed and care for and clean its cage.

Mr. Chairman, the Oklahoma Independent Petroleum Association respectfully urges this committee to recommend an import fee, to seek its passage by both Houses of Congress and to work with President Reagan for its enactment.

What would an import fee do? First of all, it would prevent scrapping of hundreds of rigs and loss of experienced crews. It would retain something like 126,000 barrels of oil per day in Oklahoma, and perhaps 1 million barrels of oil across the country. Thousands of stripper wells that have become uneconomical would be preserved.

There is a phenomenon that is going on there with the stripper wells that I have noticed that hasn't happened before. The same wells that were productive prior to 1973, and during the 1979 period, and were economical at those times, are not economical today even though the price is back to the late 1970 levels. It is because of the overall cost of living and the goods and services that are connected with those wells that are just too much out of line.

An import fee would encourage continued exploration in research. It would prevent the disbanding of thousands of experienced geophysical, geological, and petroleum engineering teams and also thousands of independent oil and gas producers. The fee would prevent plugging of thousands of wells for future tertiary recovery or enhanced recovery, 33,000 of them in Oklahoma, alone.

An import fee would keep in tact the best strategic reserve that this country could ever have, the stripper wells that are scattered across the Southwest. It, of course, would help our tax base and the economies of the States and it would help the farmers considerably. It would help retain our domestic refining capacity, which is an absolute necessity, and it also would help retain what energy sufficiency we have and it would relieve the financial pressure that is rapidly building on the banks in this country.

Last, but not least, it also will provide for national security.

Mr. Chairman, thank you very much.

[The prepared statement of Mr. Graves follows:]

BEFORE THE

ENERGY AND NATURAL RESOURCES COMMITTEE
OF THE UNITED STATES SENATE

The honorable James A. McClure, Chairman

Comments of:

Mr. J.M. "Jack" Graves, President

OIPA

Oklahoma Independent Petroleum Association

Re:

"IMPLICATIONS OF FEES ON IMPORTED OIL"

March 20, 1986
Washington, D.C.

Mr. Chairman, Members of the Committee...

My name is Jack Graves. I am an independent oil and gas producer with nearly 35 years experience operating primarily on the Osage Indian Mineral Reserve in Northeastern Oklahoma. I also worked several years as area geologist for Phillips Petroleum Co. in Bartlesville. I have the honor of serving my second term as President of OIPA, the Oklahoma Independent Petroleum Association. I appear before you today in that capacity, representing the 1,500 independent producers who are members of OIPA. We are grateful for the opportunity.

Today, I also extend greetings to Senator Nickles whom all Oklahomans are proud to see serve on this important Committee.

Mr. Chairman, the question of an import fee on foreign crude oil and refined products is one of the most complex and troublesome the industry has faced for many years. As you have heard and will hear today, the petroleum industry is not united on either side of the issue, testimony itself to the complexity of the issue and the critical state of affairs in the domestic petroleum industry. As an association, OIPA wrestled with the issue for several months. We polled our membership and held several meetings, while, at the same time, watching wellhead prices for crude oil plummet to levels few of us ever expected to see again.

Our extensive efforts actually took us to the broader realization the United States is like a sailboat on a windless day when it comes to energy policy. We have no direction and we have no momentum. We lack a comprehensive National Energy Policy to protect and promote the domestic petroleum industry and preserve national security. With foreign control of the world oil market, rapidly falling prices for domestic crude and the incomprehensible efforts by many congressmen to heap a gigantic tax burden on the petroleum industry, OIPA firmly believes we need such a National Energy Policy.

We certainly have strong support in our association for a comprehensive National Energy Policy, but there are those within our ranks who specifically oppose an import fee as part of that policy. Frankly speaking, of those who oppose the fee, most cite as the main reason their fear of Congress' true purpose for enacting it. They fear such a fee would have far too many exemptions, create burdensome paperwork and lead to congressional action expanding it to a domestic tax. They also question the wisdom of the petroleum industry, the most heavily taxed industry in the United States, proposing any type of fee regardless of its intent.

But the compelling factor which turned the tide is that the United States and the private domestic petroleum industry are being manipulated by foreign governments whose greed has plummeted the oil and gas industry into desperation and panic. Thus, despite the potential pitfalls I outlined, our position calling for a National Energy Policy goes on to say if it is necessary to enact an import tax on crude oil and refined products in order to achieve an effective energy policy, then OIPA does support such a tax and those who wish to have it enacted, provided it meets certain important criteria.

The U.S. petroleum industry is not operating in a free market. It is not one company or group of companies against another. It is U.S. petroleum companies-- independents and majors-- against the governments and nations which comprise the Organization of Petroleum Exporting Countries (OPEC). Previous OPEC actions are responsible for the fact domestic wellhead prices have fallen by more than 50 percent since November 1985, have dried up government revenues from the Windfall Profit Tax and have seriously threatened the energy sufficiency we enjoyed throughout most of the 1970s and '80s. OPEC's manipulative ways are even more frustrating when you remember they have been attempting to re-establish complete control over the world's oil market using oil which American companies discovered, developed and first produced for them.

Now as we speak, OPEC is holding an emergency meeting in Geneva to review production quotas because its plan to attain domination of the world's oil market has gone awry and prices are now in free fall. The decisions OPEC may make this week will have a direct and dramatic effect on American petroleum companies, yet neither these companies nor the Federal Government are represented at these meetings, even though other non-OPEC countries may be included.

OPEC's manipulation of the world oil market already is being felt harshly in Oklahoma and across this nation.

Experts are predicting energy consuming nations, including the U.S., may face another oil shock before this decade is out, similar to the crisis we faced in the early 1970s. The exploration budgets and company staffs which are being slashed today will have an effect on domestic energy production before this decade is out.

Just the other day, Chevron Corp. announced it is laying off more than 9,000 workers-- 15 percent of its employees-- and freezing wages. EXXON Corp., Phillips Petroleum Co. and Atlantic Richfield all announced reductions in their capital budgets; that is, the money they use for exploration and drilling, between 26 and 33 percent.

Meanwhile, commitments to domestic energy efficiency and conservation fell by the wayside when wellhead prices dropped below $18 per barrel, according to experts. That means consumption will rise.

Nationally, according to the latest available figures, our total daily domestic demand of crude oil, condensate, natural gas liquids and refined products is 16.38 million barrels. America only provides 11.18 million barrels of that, which means we rely on foreign sources for 5.2 million barrels per day, or approximately 32 percent of our daily demand.

According to a recent report from the Energy Administration Information (EIA), domestic energy consumption will increase approximately one percent a year for the next 10 years. As a result, imports of petroleum and natural gas will increase noticeably, especially if the downward trend in crude oil continues and conservation diminishes. The EIA goes on to say lower prices in the near term are expected to reduce incentives for drilling, resulting in a decline in U.S. oil production. Independent producers certainly agree with that conclusion, and add that harmful changes in the U.S. Tax Code will exacerbate that problem.

Energy analyst Bruce E. Lazier made a frighteningly accurate statement in the Wall Street Journal this week: "We won't have the easy fixes of the 1970s. We will have no new North Sea, no new Prudhoe Bay, no new Soviet Union and the only Mexico we've got is Mexico"

Unquestionably, the same elements which created the oil crisis in the early 1970s are falling into place again. The consumer, not to mention our nation's security, again will be at the mercy of foreign governments which will have successfully displayed strength, manipulative powers and control over the strongest nation on earth.

In our state, when posted wellhead prices dropped to $15 per barrel, we began abandoning what eventually will total an estimated 16,572 producing wells and 56,240 barrels of oil per day which never will be recovered. That equates to lost gross revenues of $307 million per year and lost severance tax revenues of $21.8 million.

Before prices fell to $15, we in the Sooner State already were suffering rising unemployment, a record number of bankruptcies and a state budget shortfall in excess of $427 million. Now, at $15, we anticipate as many as 25 percent of the independent operators in Oklahoma will cease operations and/or file for bankruptcy, and there will be an industry-wide increase in unemployment of another 33 percent.

If the posted price hits $10 per barrel, which seems almost a certainty especially with Sheik Yemani of Saudi Arabia predicting a fall to $8 per barrel, Oklahoma will lose another 15,000 wells and another 70,000 barrels of daily production; revenues will fall another $170 million and the state will suffer an additional direct tax loss of $12 million.

In Oklahoma, we have trouble understanding how our nation can continually sit back and rely on OPEC to provide 32 percent of our daily need, and accept the fact that will increase, while allowing as many as 33,615 of our wells to be abandoned.

We are sympathetic to Congress' desire and the consuming public's need for the lowest possible prices, regardless of the source of the raw materials or refined products. But we are misguided if we believe OPEC is flooding the market with crude and refined products because it has the best interests of American consumers at heart. To the contrary, OPEC intends to break the backs of the independent oil and gas producers; they want thousands of wells abandoned and the corresponding production from those wells to be lost forever. In short, they want to increase the amount of crude oil and refined products they export to the U.S.; and, the greater demand for their oil and products will accompany a corresponding increase in prices paid by the consumers. Are we as a nation going to let that happen?

Mr. Chairman, the consumer is going to enjoy lower gasoline and fuel heating costs for only a short time before OPEC begins cutting back on its production, reducing its supply and increasing its prices. And we will return to that situation we found ourselves in only a few years ago-- long gasoline lines and rapidly escalating costs.

OIPA recognizes the Senate and Administration's general tendency not to restrict or restrain imports. But these are desperate times which call for desperate yet effective measures. Imposing an import fee on foreign crude and refined products, which in turn would guarantee domestic producers a fair, equitable price and position in the marketplace, appears to be the only viable weapon against the economic terrorism being waged against us.

We believe an import fee would bring about a stability which the petroleum industry needs desperately. It would keep marginally profitable wells producing, curtail bankruptcies, help take pressure off our financial institutions and state budgets, slow industry unemployment and help us replace our reserves.

At the same time, such a fee must first be aimed at aiding the domestic petroleum industry, regaining as much energy independence as possible and protecting our national security. Further, such a fee must be as "clean" as possible, with few if any exemptions. Otherwise, it will be a toothless tiger.

More importantly, an import fee must be carefully designed to break the stranglehold OPEC has on us today and contribute mightily to the National Energy Policy our country needs.

The Oklahoma Independent Petroleum Assocation respectfully urges this Committee to recommend an import fee, to seek its passage by both houses of Congress and to work with President Reagan for its enactment. We must tell the foreign governments of OPEC we no longer will be manipulated by them; that America will fight their world energy domination.

Thank you Mr. Chairman and Members of the Committee.

Senator **Nickles**. Mr. Graves, thank you very much for your comments.

The next panelist is William Perrine, administrative vice president, Ashland Oil, from Ashland, KY.

## STATEMENT OF WILLIAM E. PERRINE, ADMINISTRATIVE VICE PRESIDENT, ASHLAND OIL, INC.

Mr. **Perrine**. I feel a little isolated sitting as removed as I am from the remainder of the panel, and I am sure there are some people in the room who would say that that is not an unusual position for Ashland.

Our chairman would have liked to have been here today, but unfortunately, he had a conflict; the Ashland board was meeting today, also.

Ashland is one of the Nation's largest independent refiners, with 357,000 barrels a day refining capacity. We are also a member of the Independent Refiners Coalition, which represents 29 independent refining companies. The IRC members operate about 2 million barrels a day of total refining capacity, out of about 14 to 14.5 a day of domestic refining capacity which has survived the travails of the last few years.

So I am here today to represent both Ashland and the IRC, and I am encouraged—I am going to try to summarize my statement, as you requested, Mr. Chairman. If there is any conflict, keep in mind that the written part is what I intended to say and what I meant.

Senator **Nickles**. We get caught on that sometimes, too.

Mr. **Perrine**. About this time last year, Ashland and the IRC were in the forefront of an effort to try to convince Congress that national security implications of excessive petroleum product imports were harming the Nation. Gasoline imports were increasing and domestic refineries were also shutting down at an alarming rate.

We could see a danger of the fact that if we ever called upon the Strategic Petroleum Reserve, there wouldn't be enough domestic refineries to run that reserve, and also the domestic production that we would have to run. So we encouraged and still encourage the imposition of an import fee, import quotas on refined products coming into the Nation.

As we were making that argument, we heard a lot of rhetoric from a lot of people about free markets and how free markets were the best allocators. Now, 1 year later, the situation is changed, and to say the change is a small change would be a classic understatement.

To be sure, we are still threatened by product imports. Even though last year was a record year for imports, gasoline imports so far this year are up 8 percent, finished gasoline, and other like products are up 16 percent over last year's record year.

You have cheap foreign crude oil threatening our Nation's shores at a preciptiously low price. We won't argue that low prices don't have some benefits, but they also render uneconomic the domestic production which is the lifeblood, really, of domestic refiners, in particular, we are disheartened by the fact that domestic producers are hurting today and they are the chief suppliers for domestic refiners.

But I am encouraged by hearing some of your remarks, Senator Johnston's and others on this panel. There seems to be an increasing recognition that so-called free market forces don't always provide the answers to problems of international trade in basic commodities. It has been obvious right along, and we have argued it, that there is no such thing as a free market in worldwide oil. The United States is virtually alone in thinking that there even was a free market. It wasn't a free market that took oil prices up to $40 a barrel, and it is not a free market that took them back to $12 and $15, as we see today.

As Mr. Evans said, we need, and you need to be concerned about the fact that foreign governments can jerk around the prices of a commodity so important to our economy.

Now, as for the issue at hand, IRC and Ashland really take no position on whether or not there should be a fee imposed on crude oil. However, if you do decide that you need to impose a fee, then we have a great deal of interest in how that fee is drafted and how it is applied.

Now, we have a position paper that IRC has prepared, which is attached to my testimony. I would just like to tell you a few basic factors in that position paper. It argues and justifies a differential fee on products. We say the product fee ought to be higher than crude oil fee to offset the higher costs of the domestic refiners.

Mr. Chairman, in your statement, I know you were referring to crude oil at the time, but you said that costs applied to the domestics ought to also be applied against imports; that also goes, as you well know, to refiners.

We estimate that the differential of a product fee should actually be composed of two parts. The first part is that there should be an 11 percent add-on to whatever the crude oil fee is, and that is to compensate refiners for the fact that 10 percent of the crude that naturally comes in—they need to refine the crude, so then they have higher cost in refining. Another 1 percent because of the other carrying costs of the higher-priced crude oils.

So both of those are direct results of a crude oil fee. Then there should be a $2.32 a barrel, or about 5.5 cents add-on to offset the high environmental protection costs which the U.S. refiners pay—such things as lead phase down, air and water pollution control, and so forth—but are not borne by foreign competitors.

Finally, we will agree with the other panelists, if you have a fee, there should be no exceptions. Actually, we would argue for a rebate for petrochemicals and petroleum products which are exported since they have to compete in the international markets with lower-priced crude.

Finally, there is one complementary issue that I think this committee really needs to address and probably you already have, but I wanted to express my concern, and that is the moratorium on further construction and filling of the strategic petroleum reserve. We think that that moratorium places the country in a great deal of jeopardy.

Those people seeking to perpetuate the moratorium argue that there is already 500 million barrels of oil in the SPI and that provides—and we are importing something like 5 million barrels a day of total petroleum, which is crude and products, and so you are provided with roughly 100-day supply and that is what you intended when you passed the law in the first place.

That is a simplistic notion and it begs an idea that you can actually withdraw from the oil from the SPI at 5 million barrels a day, and you can't—you can't even come near that. The last I heard, right now you can withdraw something like 2.7 million barrels a day of oil from the strategic reserve. So you don't have a 100-day supply, since you can't get it out that fast.

When you construct Big Hill—and there is a moratorium on construction—you did more than enhance the amount of oil in storage, you also add 1 million barrels a day to the drawdown rate, and that 1 million barrels a day is associated with Big Hill. Without Big Hill, you can't get that last 1 million barrels a day out. So we feel that if you continue the moratorium, the country is really in a great deal of jeopardy, and that is at 5 million barrels a day imports.

Already before this committee, you have had a number of economists tell you that—and of course, we would agree with this—that if oil prices stay as they are, you are going to be hit with double whammy in that you are going to have a greater use of petroleum and you are going to have lower production in the United States, and so the total amount of imports is going to increase greatly, beyond the 5 million barrels that we see now. We don't know that would be drawn out between crude oil and petroleum products, but we think it would be a great pressure to bring in more petroleum products, and with oil being at the great volume that it appears to be now, we think that it is not in the country's best interest to perpetuate a moratorium on SPR fill.

Thank you.

[The prepared statement of Mr. Perrine follows:]

Statement of
William E. Perrine
Administrative Vice President
Ashland Oil, Inc.
on behalf of Ashland Oil and the Independent Refiners Coalition
before the
Energy and Natural Resources Committee
United States Senate

March 20, 1986

Mr. Chairman and Members of the Committee:

My name is William Perrine. I am an Administrative Vice President for Ashland Oil, Inc. Ashland is one of the nation's largest independent refiners, with refining operations in Kentucky, Ohio and Minnesota, and marketing operations in 33 other states. Ashland Oil is a member of the Independent Refiners Coalition, which represents 29 independent refining companies, along with the American Independent Refiners Association (AIRA), a trade association. IRC members operate about 2 million barrels per day of domestic refining capacity. I am pleased to represent Ashland and the IRC here today to discuss the implications of imports and import fees upon the domestic refining industry.

Ashland and the IRC have been in the forefront of an effort to alert the Congress to the national security implications of excessive petroleum product import dependence. Gasoline imports have been increasing throughout the 1980s, while U.S. refining capacity was declining at an alarming rate. We envisioned the danger of insufficient refinery capacity to process domestic production plus the oil in the Strategic Petroleum Reserve in the event of an emergency. We urged and continue to urge Congress to consider an import fee or quota on refined products, to arrest the decline in capacity.

To say the situation has changed in the last year would be a classic understatement. To be sure, we are still threatened by product imports -- finished gasoline imports are up by eight percent over last year's record pace, and total light products -- blendstocks, distillates, petrochemical feedstocks, etc. -- are up 16 percent. To these considerations must be added the dramatic problem now confronting the domestic oil-producing industry, which is threatened by a surplus of foreign crude oil and a precipitous decline in prices. While lower oil prices provide many benefits, they also render uneconomic our higher cost domestic oil production, which, in turn, raises our oil dependence on foreign sources.

There is a growing recognition that so-called "free market" forces do not always provide the answer to problems of international trade in basic commodities. It is increasingly evident that there is no free market in worldwide oil, and that the United States is virtually alone in believing there could be one. It was certainly not a free market that took crude oil prices to $40/bbl., and a free market has not dropped them to $13-$15/bbl. It should be of concern to this body that foreign governments can jerk around the price of a basic commodity so critical to our economy.

As a group, the IRC takes no position on the question of whether or not a fee on imported crude oil should be imposed. If Congress should determine that such a fee is in the best interests of the nation, however, we do have a vital interest in how the fee is to be crafted and applied.

The IRC has prepared a detailed position paper on this issue, which is included as part of this statement. The paper justifies and quantifies the need for a higher fee on refined petroleum products if a crude oil import fee is adopted. In brief:

1. The fee on refined products should be higher than on crude oil, to offset the higher costs on domestic refiners compared to their foreign counterparts.

2. The differential required for the product fee consists of two parts:
   a. An 11 percent add-on to the crude fee to compensate for higher refinery fuel costs and inventory carrying costs which will result directly from the crude fee, plus
   b. About $2.32/bbl., or about 5.5¢/gal., to offset the higher domestic environmental protection costs which U.S. refiners pay -- lead phasedown, air and water pollution control, etc. -- but which are not borne by foreign competitors.

3. There should be no exceptions from the fees -- not for crudes from specific sources nor for products intended for designated purposes or areas of the nation. If exemptions are necessary, fees should be collected and rebated to users. We also favor a rebate for petrochemicals or petroleum products exported, so that they can compete on the international market.

Finally, there is a complementary issue that cries for the immediate attention of this committee -- the moratorium on further construction and filling of the Strategic Petroleum Reserve. Such a moratorium could place our national security in great jeopardy.

Those seeking to justify a halt to SPR expansion argue that we already have coverage for more than 100 days' loss of imports. There are, they point out, approximately 500 million barrels of crude oil in SPR inventory. Current imports of crude oil and petroleum products combined are slightly less than 5 million barrels per day (b/d). This simplistic approach begs the assumption that we can withdraw the stored oil at a 5 million b/d rate. We can't. In fact, we can do barely half of that.

Construction and filling of the Big Hill storage dome does more than add volume to the SPR. It also enhances the withdrawal rate by 1 million b/d. Without Big Hill, and without other enhancements now put on hold, withdrawal rates may never exceed the approximately 2.7 million b/d rate thought to be sustainable today. A future cutoff of imports, even if they are no higher than today's level, dooms us to a shortfall of about 2.3 million b/d, or about 14 percent of demand. I don't need to remind you what much smaller shortages have done to the economy in the past.

Economists are predicting that a continuation of today's low crude oil prices will result in the "double whammy" of reducing domestic oil production while spurring domestic oil product demand. This will serve not only to increase crude oil imports, but will accelerate the importation of refined products. This means the shutdown of more U.S. refineries, increased foreign product dependence and a heightened vulnerability to supply disruptions. In light of these factors, and with crude oil today being a real bargain, it would seem a poor time to stop construction and filling the SPR -- our main line of defense against future cutoff by foreign suppliers.

I would be happy to try to answer any questions that you might have.

## THE EFFECTS OF A CRUDE OIL AND REFINED PRODUCT IMPORT FEE ON THE DOMESTIC REFINING INDUSTRY:

### THE NEED FOR A HIGHER FEE ON REFINED PRODUCT IMPORTS

Prepared by the Independent Refiners Coalition

The decision on a crude oil and product import fee is a political and economic judgment to be made by the Congress and the Administration. It affects energy policy, national security, tax and budget policy. At this time, the Independent Refiners Coalition (IRC) takes no position for or against import fee legislation in general. For purposes of this analysis, however, we have assumed that an import fee will be adopted.

In order to prevent major damage to the domestic refining industry, it is essential that a higher fee be imposed on refined petroleum product imports than on imported crude oil. This analysis justifies and quantifies the need for the higher product fee. It is equally essential that no imported products be exempted from the fee. Exempting products like home heating oil from the fee would be devastating to U.S. refiners. Instead, if exemptions of some products proves to be a political necessity, the fee should be collected at the border and rebated to customers as needed. Finally, U.S. crude oil and product exports should not bear any cost of the fee because it would greatly lessen our ability to compete in the international marketplace against refiners paying world market prices for crude oil.

Several different approaches to import fees have been introduced in the House and Senate. There are three areas of critical concern to domestic refiners which any import fee proposal must address:

- o **Operating Costs -- Congress should not adopt legislation which would increase U.S. refinery operating costs in relation to those of other world refiners;**
- o **Environmental Offsets -- Any fee structure must act to offset the environmental cost disadvantage borne by U.S. refiners which is not borne by our foreign competitors; and**

- **Exemptions -- Exempting specific products or specific foreign oil producers from the fee will result in market distortion and diminish U.S. production of the exempted products. In addition to causing an increase in imports of those products, such exemptions would be a U.S. Government grant of an unfair production cost advantage to foreign refiners. Any exemptions will require higher fees to be imposed on unexempted products to prevent a legislated economic loss for U.S. refiners. Finally, exemptions will reduce revenues.**

These three factors are critical to the survival of U.S. refiners. U.S. refiners are plagued by unfairly-traded imports from government-owned and supplied refineries overseas. Increasing imports of gasoline and other refined products have resulted in the shutdown of U.S. refineries since 1983. The diversion of product exports due to tariff and non-tariff barriers existing in the other major consuming nations continues to exert intense pressure on refiners operating in the U.S. market. According to data published in the 1984 British Petroleum Statistical Review of World Energy, the U.S. refining self-sufficiency ratio is now the lowest of any world region (Chart A). Additional cost disadvantages caused by improperly designed import fees will result in further shutdowns and increased dependence on refined product imports.

## OIL PRICE DECLINE THREATENS INDEPENDENT OIL PRODUCTION

From an energy policy standpoint, the sudden price decline is problematic -- in some respects it is dangerous. The fall in world crude oil prices will certainly cause a more precipitous decline in domestic exploration and production. Most immediately threatened is the production of approximately one million barrels a day of oil from stripper wells. Much of this production is supplied by independent producers, who supply the bulk of independent refiners' domestic crude oil supplies. The viability of these independent producers is critical to the operations of independent refiners nationwide.

The immediate effect of reduced domestic crude supplies will be greater dependence on oil imports to replace lost domestic production. As demand increases in the future while domestic production continues to slide, it is highly probable that more and more of the petroleum imports will be in the form of refined products; this will shut down more U.S. refineries and create a greater national security problem than the increase in crude oil imports.

## IMPACT OF THE FEE ON U.S. REFINERS

If an import fee is adopted by the Congress, such legislation should mandate a higher fee for refined products. If the differential is not included, foreign refiners will automatically be granted a major production cost advantage. If certain refined products are excluded, U.S. refinery economics will be disrupted, resulting in further U.S. refinery shutdowns. The independent refining sector will be most severely affected.

Whether import fee legislation is finally adopted or not, the Congress should correct the environmental cost inequities which result from environmental costs levied on U.S. refiners but not on foreign refiners.

The following portion of our analysis is technical, so we should define terms. The terms "crude oil" and "feedstock" are used interchangably. They refer to petroleum that is purchased for further processing such as cracking, distillation or reforming. "Products" and "blendstocks" are petroleum that is purchased for direct consumer uses and simple blending into consumer products.

## Operating Costs for U.S. Refiners Will Increase

### 1. Fuel Costs

**U.S. refiners use energy equivalent to 10 percent of their crude oil to convert crude oil to refined products. Of this 10 percent, about two-thirds derives directly from crude oil. A fee which increases crude oil prices to U.S. refiners would increase U.S. production costs relative to foreign costs.**

In 1984, U.S. refiners used 2.67 quadrillion BTUs to convert 12 million barrels per day of crude oil to refined products (Chart B). According to the BNA Energy Report (10-24-85), U.S. refiners have increased energy efficiency by 27 percent since 1972. However, they still need approximately 10 percent of the energy content of crude oil to convert crude oil into refined products. Two-thirds of this energy is derived directly from the crude oil itself. The cost of other fuel sources, natural gas, coal and electricity, will respond directionally to the imposition of the crude oil import fee.

A $7 per-barrel fee on crude oil would increase U.S. refinery fuel costs by $.70 per barrel. A $5 per barrel fee would increase refinery fuel costs by $.50 per barrel. This translates directly into a production cost advantage for foreign refiners who do not pay such a feedstock fee. To offset this competitive advantage, fees on imported products need to be 110 percent of the fee on crude oil.

### 2. U.S. Refiners' Working Capital Costs Will Be Increased

**Paying above-world oil prices increases the cost of inventory, raising working capital requirements and interest payments for U.S. refiners, again leaving foreign refiners unaffected.**

Despite incentives to reduce inventories, such as high interest rates and falling oil prices, U.S. refiners have carried on-site inventories equal to about 35 times their average refining runs since 1981 (Chart C). The inability to reduce this stock level indicates that the minimum on-site inventory requirement is 35 barrels for every barrel which is refined.

To carry adequate inventories, nearly all refiners must borrow money. Major integrated oil companies probably pay prime rate. Independent refiners typically pay prime plus one or two points. Thus, a $7 import fee would cause a U.S. refinery to need $245 more working capital for every barrel of oil it refines. Assuming a 10 percent interest rate, working capital charges would increase by about 7 cents per barrel. A $5 per-barrel import fee would cause a U.S. refinery to need $175 more working capital for every barrel refined. At a 10 percent interest rate, working capital charges would increase by about 5 cents per barrel. Foreign refiners would not bear this cost. To offset this U.S. disadvantage, Congress must tax imported products about 1 percent more than imported crude oil.

## Existing Environmental Cost Disparities Disadvantage U.S. Refiners

### 3. Air and Water Pollution Control Expenditures

**U.S. refiners have paid $2.5 billion annually in air and water pollution control costs since 1980. Foreign refiners exporting to our market do not bear these costs. This inequity must be corrected.**

According to the American Petroleum Institute, environmental conservation expenditures by the U.S. refining industry have averaged $2.5 billion annually since 1980 (Chart D). This amounts to about $.57 per barrel of crude oil processed, or 2.5 cents per gallon of gasoline produced. This cost is independent of the fee level. A March, 1985, Congressional Budget Office (CBO) study, "Environmental Regulation and Economic Efficiency," showed that other countries were not only spending fewer absolute dollars on pollution control than the U.S., but that they were spending a lower percentage of their Gross Domestic Product (Chart E). While the data on environmental expenditures is quite spotty in the CBO report, it leads to the conclusion that the cost of meeting U.S. environmental regulations puts U.S. refiners at a competitive disadvantage. To offset this handicap, product taxes need to be $.57 per barrel more than crude oil feedstock taxes.

### 4. U.S. Lead Phasedown Costs Create Competitive Disadvantage

**New U.S. expenditures to meet EPA's U.S. lead phase-down requirements have provided a major production cost advantage to foreign refiners that do not have to limit lead use.**

EPA has quickened the pace of lead phasedown in the United States. EPA's estimate of the cost of reducing lead use in gasoline from 1.1 grams per gallon to .1 grams per gallon is $2 billion per year in addition to the $2.5 billion in air and water pollution costs. However, this does not represent the full competitive disadvantage created by unilateral lead phasedown.

There is a popular misconception that gasoline is produced as a single product, and that if it meets U.S. specifications on octane and lead useage, then it must have similar production costs. This is not true. Refiners worldwide produce gasoline as components, which are blended to meet customer specifications. This universal production procedure enables foreign refiners to use lower-cost, lead-derived octanes in the gasoline they consume domestically and free up higher octane components and unleaded gasoline for the U.S. market, where octane costs are much higher. With the exception of Japan, all countries allow more lead use than the United States (Chart F).

Refiners in many nations continue to use over three grams of lead per gallon of gasoline. In the United States, refiners can use only 0.1 grams of lead per gallon. All gasoline produced in the U.S. must be no or low-lead. In the simplest possible terms, this means that the cheapest production method -- using lead -- is exhausted early in the refining process. After that, the cost of producing octanes without lead increases. The slow pace of lead phasedown in other nations has created a significant production cost advantage for foreign refiners of about 9 cents a gallon, or about $1.75 per barrel of crude oil processed (Charts G and H). Until foreign nations reduce their allowable lead usage, Congress must offset this foreign advantage if it wants an adequate U.S. refining industry.

## 5. Superfund Legislation Could Affect U.S. Refiners

**Superfund legislation has not yet been finalized. U.S. refiners would prefer the imposition of a broad-based tax. Whatever form Superfund takes, it must recognize fuel and working capital costs.**

The U.S. refining industry recognizes the need for a clean environment. However, from the competitive standpoint, the industry cannot afford a direct burden which foreign competitors in the U.S. market do not pay. These inequities promote refined product exports to the United States. Superfund, in its final form, must recognize the same fuel and working capital costs which the import fee legislation should recognize, or else the import fee needs to offset Superfund.

## Summary of Offsets

Assuming that all imported products pay fees, we can summarize the offsets required for the U.S. refining industry to 1) break even on the crude oil import fee, and 2) recover environmental cost expenditures not borne by foreign refiners that compete in the U.S. market.

Because fuel and working capital costs vary with the absolute level of the crude oil fee, product fees should be proportional to crude oil fees if U.S. refiners are to break even under the fee. To offset the increased fuel cost, product fees need to be 10 percent more than crude oil fees. To offset the increased working capital costs, product fees need to be 1 percent more than the crude oil fee. Therefore, product fees must be at least 111 percent of the crude oil fee to offset operating cost increases caused by the legislation.

The nine cent-per-gallon gasoline production cost disadvantage created by lead phasedown is equivalent to $1.75 per barrel of crude oil processed and is additive to the historical $.57 per-barrel air and water pollution control expenditure. Therefore, in addition to the 111 percent of feedstock fee, an environmental cost offset of approximately $2.32 per-barrel should be collected on all imported products to offset this artificial advantage.

In short, assuming that all imported products pay fees, product fees should equal 111 percent of feedstock fee plus about $2.32 per barrel.

For example, a $7 crude oil import fee would result in a $10.09 per-barrel fee on products: $7.77 to recover fuel and working capital charges and $2.32 to offset higher U.S. environmental costs. For a $5 crude oil import fee, the product fee to allow U.S. refiners to break even would be $7.87 per barrel: $5.55 to recover fuel and working capital charges and $2.32 to offset environmental costs.

From the viewpoint of domestic refiners, the environmental offset is an absolute necessity whether import fee legislation is passed or not. It must be emphasized that the U.S. refining industry is asking only for an offset to legislation-induced cost increases. Adoption of these measures will not produce "windfall" refining margins.

### 6. Exemptions of Certain Products Would Injure U.S. Refiners

> **If any refined products are exempted or allowed to pay fees below the crude oil fee, the fee on the remaining product slate must be increased proportionately. Failure to do so would increase product imports at the expense of U.S. refining capacity.**

We do not support the exemption of any crude oil or product import from a fee. Such exemptions could greatly reduce revenues realized from the import fee program, and would open the floodgates for special treatment on a country-by-country basis. Product exemptions will result in market distortions, and increase imports of exempted products while diminishing U.S. production of the exempted products.

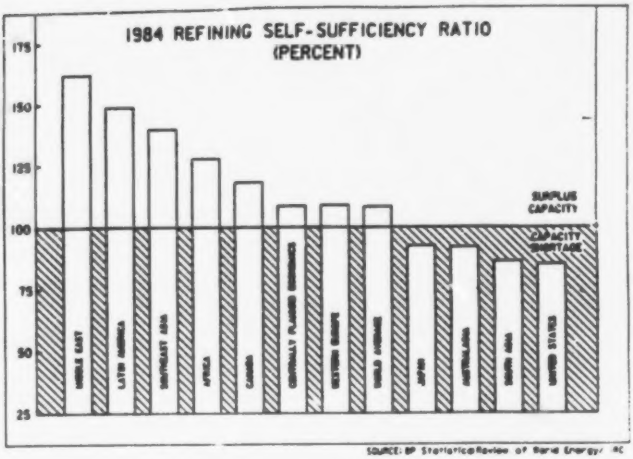
We wish to emphasize that the cost offsets we have described are "breakeven" offsets. If any portion of the product barrel is exempted, the market price of the exempted product will be tied to the world oil price; U.S. refiners will be unable to recover any of the increased costs of producing the exempted products. Therefore, the fee on non-exempted products will have to increase proportionately, as shown on the following table, in order to avoid legislating economic losses for U.S. refiners.

| Percent of U.S. Product Slate Exempted | Product Tax Formula Required for Breakeven |
|---|---|
| 0 | 111 % of crude oil tax plus $2.32 per bbl |
| 10 | 123 % of crude oil tax plus $2.58 per bbl |
| 20 | 139 % of crude oil tax plus $2.90 per bbl |
| 30 | 159 % of crude oil tax plus $3.31 per bbl |
| 40 | 185 % of crude oil tax plus $3.87 per bbl |
| 50 | 222 % of crude oil tax plus $4.64 per bbl |

Obviously, the exemption of any product would cause the remaining products to bear a higher fee. If the crude oil fee was $7 per barrel today and no refined products were exempt, the product fee would have to be $10.09 per barrel. If some products were exempted (as is the case in S. 1997, introduced this year in the Senate), then by the time all the importers of kerosene, kerosene-jet fuel, diesel fuel, distillate, residual fuel oil, asphalt and road oil declared their product to be home heating oil, process fuel or residual fuel oil, 30 - 40 percent of the U.S. refined product slate could be exempt from both the crude fee and the environmental offset. If 30 percent of imported products paid no fee, the breakeven fee on remaining products would have to be $14.44 per barrel. In the 40 percent-exempt case, the fee on product imports would have to be $16.82 per barrel. Thus, the $3 per barrel environmental offset could be insufficient to avoid mandating economic losses for U.S. refiners.

This complication leads us to support no exemptions for any product imports. If exemptions must be granted, a fee should still be collected on all product imports -- with rebates provided to users of exempted products.

CHART A



SOURCE: BP Statistical Review of World Energy/ NC

- Regional refining capacity as reported by BP was multiplied by 0.85 to allow 'for mainterance downtime, seasonal demand fluctuations and modest growth in refined product demand to get usable capacity.
- The usable refining capacity was divided by the regional oil consumption as reported by BP to determine the "refining self-sufficiency ratio."
- Regions with refining self-sufficiency ratios below 1.0 cannot refine all the oil they consume and have probably rationalized refining capacity to the point where national security is impaired.
- Using BP's data which overstates U.S. operating refinery capacity, the U.S.A. has the worst ratio of all regions.
- If we use the 1984 year-end U.S.A.capacity, our ratio becomes 80.
- Congress and the Administration need to begin an immediate national security (232) investigation of refined product imports and domestic refining capacity and formulate some sound energy policy.

CHART B

## 1984 U.S. REFINERY FUEL CONSUMPTION

| | Physical Units | Million Btu's Per Unit | Million Btu's |
|---|---|---|---|
| Crude Oil | 153,000 barrels | 5.800 | 887,400 |
| Distillate Fuel Oil | 1,451,000 barrels | 5.825 | 8,452,075 |
| Residual Fuel Oil | 18,814,000 barrels | 6.287 | 118,283,618 |
| Liquified Petroleum Gases | 8,419,000 barrels | 3.599 | 30,299,981 |
| Natural Gas | 573,330 MMcf | 1,031 | 591,103,230 |
| Still Gas | 1,922,230,000 barrels | 6.000 | 1,153,380,000 |
| Marketable Petroleum Coke | 1,950,000 barrels | 6.024 | 11,746,800 |
| Catalyst Petroleum Coke | 65,666,000 barrels | 6.024 | 395,571,984 |
| Coal | 347,000 short tons | 24.230 | 8,407,810 |
| Purchased electricity | 29,354 million KWH | 10,445 | 306,602,530 |
| Purchased steam | 30,635 million pounds | 1,200 | 36,762,000 |
| Hydrogen | 793 MMcf | 324 | 256,932 |
| Other | 1,527,000 barrels | 5.796 | 8,850,492 |
| | | | 2,670,604,852 |

| | |
|---|---|
| Energy used per barrel of refinery input | 0.556 |
| Energy used per barrel of crude input | 0.606 |
| Energy used per barrel of total gasoline produced | 1.131 |
| Energy used per barrel of net gasoline produced | 1.258 |

SOURCE: DOE/EIA Petroleum Supply Annual 1984

- With the exception of natural gas, coal and purchased electricity and steam, the energy consumed comes directly from the feedstock.
    - 65 % of energy used changes as crude costs change
    - 35 % of energy used can be assumed to change with crude cost
- Should a tax be levied upon imported crude oil and feedstocks, U.S. refinery fuel costs will increase while foreign refinery fuel costs remain at world price levels.
- This creates a competitive disadvantage that Congress must offset should it enact a tax on imported crude and feedstocks.
- Product fees need to be at least 10 percent more than feedstock fees to offset increased fuel costs.

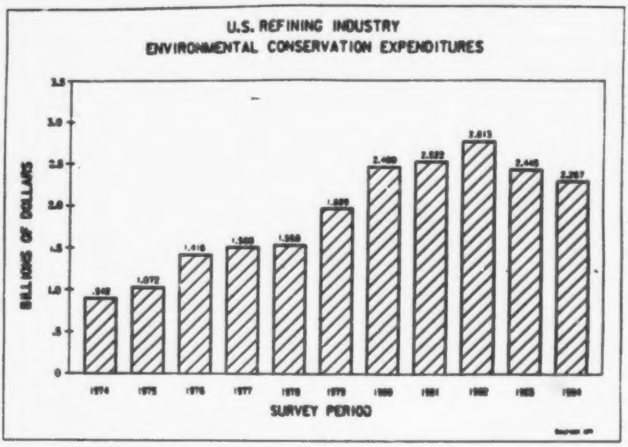
CHART C

## WORKING INVENTORY REQUIREMENTS

| DATE | STOCKS HELD AT REFINERIES (millions of barrels) | REFINERY CRUDE RUNS (millions barrels/day) | STOCKS HELD AT REFINERIES (days) |
|---|---|---|---|
| 12-31-81 | 466.4 | 12.470 | 37.4 |
| 12-31-82 | 431.7 | 11.774 | 36.7 |
| 12-31-83 | 402.5 | 11.685 | 34.4 |
| 12-31-84 | 394.7 | 12.044 | 32.8 |
| 11-30-85 | 407.8 | 11.973 | 34.1 |
| AVERAGE | 420.6 | 11.999 | 35.1 |

- Refiners have large incentives to reduce stocks
  - high interest rates
  - expectations of falling oil prices.
- The failure to reduce stocks means these must be minimum working inventories.
- An import tax increases the cost of carrying this required inventory by 35 times the interest rate times the import tax.
- At a 10 percent interest rate, this translates into about a 1 percent increase in operating costs.
- Foreign refiners do not have to pay this cost and thereby gain a competitive advantage.
- Product fees need to be at least 1 percent more than feedstock fees to offset increased working capital costs.

CHART D



- The above pollution control expenditures are based upon individual oil company expenditures, as reported to the American Petroleum Institute.
- Since 1980 the refining industry has spent over $2.5 billion per year to preserve the U.S. environment.
- This is equivalent to 2.5 cents for every gallon of gasoline produced.
- Chart E shows that other countries pollution control expenditures are considerably less than this one industry's expenditure.
- This unilateral quest for a clean environment creates a competitive disadvantage that should be offset.

CHART E

**POLLUTION CONTROL EXPENDITURES IN THE UNITED STATES, CANADA, JAPAN, AND WEST GERMANY, 1973-1982 (In billions of current dollars and as a percentage of gross domestic product)**

| | United States | | Canada | | Japan | | West Germany | |
|---|---|---|---|---|---|---|---|---|
| Year | Billions of Dollars | Percentage of GDP | Billions of Dollars | Percentage of GDP | Billions of Dollars | Percentage of GDP | Billions of Dollars | Percentage of GDP |
| 1973 | 4.9 | 0.38 | 0.13 | 0.10 | 1.8 | 0.45 | NA | NA |
| 1974 | 5.7 | 0.41 | 0.14 | 0.09 | 3.1 | 0.60 | NA | NA |
| 1975 | 7.0 | 0.46 | 0.14 | 0.08 | 3.2 | 0.64 | 1.0 | 0.24 |
| 1976 | 7.2 | 0.43 | 0.14 | 0.06 | 2.7 | 0.47 | 1.0 | 0.21 |
| 1977 | 7.3 | 0.38 | 0.05 | 0.03 | 1.7 | 0.22 | 1.1 | 0.18 |
| 1978 | 7.6 | 0.35 | 0.06 | 0.03 | 1.7 | 0.16 | 1.2 | 0.17 |
| 1979 | 8.4 | 0.35 | 0.09 | 0.04 | 1.2 | 0.13 | 1.2 | 0.15 |
| 1980 | 9.2 | 0.36 | NA | NA | 1.5 | 0.13 | NA | NA |
| 1981 | 8.9 | 0.31 | NA | NA | 2.0 | 0.17 | NA | NA |
| 1982 | 8.5 | 0.28 | NA | NA | NA | NA | NA | NA |

SOURCES: Congressional Budget Office. Exchange rates and GDP data from International Monetary Fund, *International Financial Statistics* (various years). Pollution control expenditure data for United States from Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business* (June 1981 and June 1983). Data for the other nations obtained from the respective embassies (1983).

- The data collected by the CBO is indeed spotty; but it shows that U.S. manufactures may be at a competitive disadvantage due to U.S. environmental preservation costs.
- Per EPA's estimate, U.S. costs will increase $2 billion per year under the new lead phasedown regulations.
- Regardless of one's beliefs concerning preserving our environment, one cannot expect a domestic industry to thrive when they have large operating cost components that foreign competitors do not face.

CHART F

| | Maximum Lead Usage Rates | | |
|---|---|---|---|
| | GMS/Liter | GMS/Gal. | Comments |
| **Africa** | | | |
| Nigeria | 0.77 | 2.91 | |
| Egypt | 0.40-0.84 | 1.51-3.18 | Depending on grade. |
| Others | 0.84 | 3.18 | |
| **Middle East** | | | |
| Iran | 0.56 | 2.12 | |
| Iraq | 0.79 | 2.99 | |
| Israel | 0.42 | 1.59 | |
| All Others | 0.84 | 3.18 | Talking about lead reduction, no timetable as yet. |
| **Far East** | | | |
| Japan | -- | -- | Essentially unleaded. |
| Taiwan | 0.32-0.41 | 1.21-1.55 | Depending upon grade. |
| India | 0.56-0.80 | 2.12-3.03 | Depending upon grade. |
| Pakistan | 0.42-0.84 | 1.59-3.18 | Depending upon grade. |
| Hong Kong | 0.40 | 1.51 | |
| South Korea | 0.32 | 1.21 | |
| Phillipines | 0.28 | 1.06 | |
| Others | 0.84 | 3.18 | |
| **Australasia** | | | |
| Australia | 0.84 | 3.18 | Beginning in 1986, new cars must use unleaded. |
| New Zealand | 0.84 | 3.18 | Going to 0.45 gm/l on 7-1-85. |
| **Europe** | | | |
| Portugal | 0.64 | 2.42 | Going to 0.4 gm/l on 1-1-86 to meet EEC standards. |
| Ireland | 0.64 | 2.42 | Going to 0.4 gm/l on 1-1-86 to meet EEC standards. |
| Spain | 0.48-0.65 | 1.81-2.42 | Depending upon grade. |
| Yugoslavia | 0.60 | 2.27 | |
| Czechoslovakia | 0.40 | 1.51 | |
| Iron curtain | Unknown | -- | |
| Britain | 0.40 | 1.51 | Going to 0.15 gm/l on 1-1-86. |
| W. Germany | 0.15 | 0.57 | |
| Denmark | 0.15-0.40 | 0.57-1.51 | Depending upon grade |
| Austria | 0.15 | 0.57 | |
| Finland | 0.40 | 1.51 | |
| Norway | 0.15-0.40 | 0.57-1.51 | Depending upon grade |
| Italy | 0.40 | 1.51 | Bill pending to require 95 octane unleaded availability no more than 0.15 gm/l after June 1, 1986, unleaded priced 10 percent below leaded and and no more than 3 percent benzene content. Considering all unleaded later. |
| Sweden | 0.15 | 0.57 | |
| Switzerland | 0.15 | 0.57 | |
| Other Europe | 0.40 | 1.51 | Talking about change by 1989 will include some unleaded. |
| **Western Hemisphere** | | | |
| Canada | 0.77 | 2.91 | Will go to 0.29 gm/l on 1-1-87 recent average use was 0.49 gm/l. |
| Mexico | 0.70 | 2.65 | |
| Other Latin America | 0.84 | 3.18 | Some countries limit lead content of regular grade gasolines to 0.4 or 0.6 gm/l. |
| United States | 0.03 | 0.10 | Beginning 1-1-86. |

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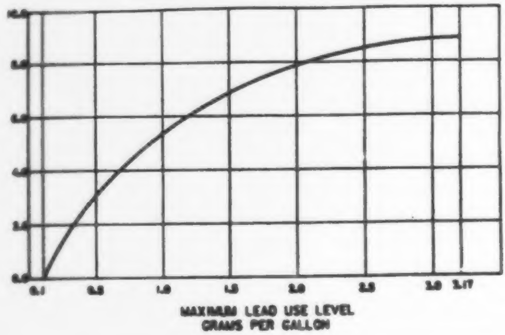
CHART G

FIGURE 6

COMPETITIVE DISADVANTAGE CREATED BY U.S. LEAD PHASEDOWN

(CENTS PER GALLON GASOLINE)



- The above competitive disadvantage is based upon the following assumptions:

  -typical lead response in gasoline blending
  -lead cost of 0.7 cents per gram
  -U.S. octane cost of 1 cent per gallon octane.

- The cost of reducing the allowable U.S. lead usage from 1.1 to 0.1 grams per gallon is between 5 and 6 cents per gallon.

  -justifies trading value of lead rights
  -consistent with EPA's cost analysis

- The disadvantage increases as the maximum lead use level of the producing country increases.

  -at 3.17 grams per gallon of lead usage, the disadvantage is almost 9 cents per gallon
  -this will cause foreign refiners to produce gasoline for the U.S. market and cause more U.S. refiners to shut down.

- Combine this disadvantage with the pollution expenditures and proposed $3 per barrel the environmental offset fee in the Wallop-Bentsen Energy Policy, legislation may need to be increased.

CHART H

## HOW U.S. LEAD PHASEDOWN PROVIDES AN ADVANTAGE TO FOREIGN GASOLINE AND BLENDSTOCK SUPPLIERS IN THE U.S. MARKETPLACE

To produce 89 octane leaded regular gasoline for domestic consumption, a foreign refiner using 3.18 grams of lead per gallon starts with a blend of unleaded gasoline components with an octane of 77. By adding lead, he can create the remaining 12 octanes to reach the 89 octane level for about 2 cents worth of lead.

The U.S. refiner, who can use 0.1 grams of lead per gallon, can get only one lead-derived octane and must have a blend of unleaded components with an octane of 88. To make up the 11 octane difference with unleaded gasoline blends, the U.S. refiner must resort to high cost technologies which create octanes at costs in excess of one cent each.

The foreign refiner simply buys about 2 cents worth of lead to use in his domestic product and then, at no extra cost, simply changes the set points on the valves that divert high octane components to a high octane tank and low octane components to a low octane tank, to which he adds the lead. Thus, the foreign refiner is able to set aside an 88 octane blend of unleaded components that cost him only 2 cents per gallon in additional production costs. The foreign refiner then competes head-on with the lead-limited U.S. refiner who is spending over 11 cents in additional processing costs to get an equivalent blend.

Senator **Nickles**. Thank you, very much, for your comments. I have a few questions and we will try to move on rapidly, since we have so many Senators.

Mr. Burtis, you differed from Mr. Hartley. I realize that is the reason why we set the panel up, that there is a division in the industry and we wanted to hear both sides.

Mr. Burtis, is there any level, aside from the free market standpoint, which you think that maybe we should do something? Now the Saudis have increased their production about 2.5 million barrels a day, and they have it up to 4.5 million per day. They could, as Mr. Hartley mentioned, increase that up to 8 million barrels per day, and if they did, I would think that you would probably see prices well below $10, if not $5. It would really have a tremendous downward pressure.

Is there any price level where you would think maybe our Government should intervene?

Mr. **Burtis**. Senator, my feeling is that it is not so much a matter of price level, and you can understand that we wrestled this, too. Fred and I have been known to disagree on some specifics, although probably not in principle.

But, this may be impolitic, but I think what I would have to say to you is that it sounds very attractive, whether it is laid on at $10 or $13 or whatever. Experience tell us, however, that inevitably what we would probably get is a fee with lots of exemptions and lots of exceptions to take care of friends in Canada and Mexico, Venezuela, the North East, and then another tax laid on—and some of this you already hear in the press, at least—be sure that the domestic oil companies don't benefit from this.

I am sorry to say that is my expectation and I don't like the notion of ending up with two windfall taxes and no windfall.

Senator **Nickles**. Mr. Hartley, a quick question. I think almost every panelist mentioned the idea of exemptions or exceptions. In the bills before us we have—and you mentioned a different threshold—I think Senator Wallop has a bill that has a threshold to tax anything priced below $22; Senator Boren, myself, and others have one, a differential tax that goes up to $5.

The Boren bill had an exception, I guess, or a rebate revision for the North East, and also for petrochemicals or those industries that are using imported oil for feedstocks, particularly feedstocks for export. Would you favor an exemption for either residential or for feedstock users?

Mr. **Hartley**. Well, I am impressed with the fact that this Congress and Government didn't worry about the price of heating oil for the last 10 years when it was based on crude oil at $35 to $45 a barrel, and we are talking here about a price range of around $27 a barrel as the floor price for domestic crude. On the other hand, this import fee would provide cash-flow to the Government, and if the Government in its wisdom thought they ought to take care if the heating oil buyer in the North East, there is nothing to prevent the distributor to the customer to include a copy for submittal to the United States for a cents per gallon rebate on the part of——

Senator **Nickles**. So you don't think the fee should have a rebate provision in it. If the Federal Government, by taking in those revenues, wanted to increase the financing for low-income energy assistance or some other vehicle, you could do it in that manner.

Mr. HARTLEY. I think it is an entirely unrelated problem, but I recognize that the politics of the situation is such that people might do that. On the other hand, I would point out to you that those who use air-conditioners and buy electricity for same in the South, they have a different cost level there in the summertime, whereas the New Englanders don't have to——

Senator NICKLES. How about the exemption for imported oil that is used for raw materials, for petrochemicals, for fertilizers, and that type?

Mr. HARTLEY. I see no reason for an exemption there, unless the product is going to be exported out. But there would have to be, as I stated, in fact an import fee on crude oil petroleum, but also all petroleum products. And in that broad sense of petroleum products, it includes those products that are made from petroleum in the chemical sense. So that the domestic chemical producers would not be put out of business just as everybody on the oil side is.

Now, as to this situation with Canada, I shed tears for Canada because they have themselves in exactly the same mess that we are in. They have worked hard to increase their supplies of crude oil. They are far ahead of anybody else, with the exception, I guess, of the South Africans, in having a synthetic oil industry, producing from the tar sands of Alberta. There is no way in God's world they could build any more plants at today's price levels.

Canada is a net importer of crude oil. They do export to the United States, but they also import like made on their eastern seaboard. So that Canada should put into effect the same plan that we have.

Senator NICKLES. I appreciate your comments. I want to ask a couple of more questions. Mr. Graves, in Oklahoma you mentioned the strip-well product. How many stripper wells did you say we have in the State of Oklahoma?

Mr. GRAVES. There are about 80,000, sir.

Senator NICKLES. There average production per day would be about what?

Mr. GRAVES. Between 2 and 3 barrels per day; about 2.5 barrels.

Senator NICKLES. You mentioned that you, yourself, had analyzed several of your wells. Is it around the 2-barrel per day that you are figuring that these are losers and the ones maybe that are higher than that—? At what point does a marginal-stripper well become unprofitable and you decided to shut it in?

Mr. GRAVES. It is not quite that easy to answer because there are just so many different variables, because of the lifting cost, water and how much corrosion you have, and that sort of thing. We prefer to get it right down on the lifting-cost per barrel. The lowest-lifting cost that we have is around $3.50 a barrel on the very best leases I would say that the independents have in the State.

Of course, at that rate, even the very best ones, you would have to have something around 2 barrels a day—trying to answer your question. I have noticed that across the board, the wells that are making less than 2 barrels a day now are of course the ones that are being shut in, just almost without question because at a barrel a day or 1.5 barrel a day, a lot of those wells were uneconomical when the price dropped below $25.

Senator Nickles. Are a large number of those wells being shut in today?

Mr. Graves. Yes, sir. Wholesale numbers.

Senator Nickles. If you shut in those wells, are they permanently shut in? Can one go back 1 year or 2 from now, if the price should increase, and increase production?

Mr. Graves. It depends. Now, of course, shutting in is one thing, plugging and abandoning is something else. I mean, once the equipment is pulled off of them—and no one wants to leave equipment sitting in the field idle because there is no return on it that way, and also it falls into a state of disrepair. But a well could be just left as is for a while.

Of course, the Oklahoma Corporation Commission has gone along with that. OIPA got a rule through which allows the rules to be shut in as long as they are not causing any pollution, but you still have landowners to deal with, the royalty owners—if the wells are not producing, why, they would like to have them plugged. It is a hydra-headed snake.

Senator Nickles. If you abandon and plug a well, it is not likely that at any time you would ever be able to go in and get additional production out of it?

Mr. Graves. No, sir. If we have to plug that well and pull the equipment off of it, it would just be cost-prohibitive, when you are talking about stripper wells, 2 barrels a day. You could not go back in that well, nor could you justify drilling another well there.

Senator Nickles. I appreciate that. One final question, Mr. Burtis or Mr. Hartley, or both of you. One of the reasons why I supported an equalization fee is that I think that it is the one tool that we have at getting the Saudis' attention. Right now the Saudis are almost the sole culprit for the dilemma that we are in. They have increased their production and they are responsible for the price decline that we have seen, 50 percent in the last 2½ months.

I would say that an oil import fee would be the last thing that they would us to do.

Mr. Hartley. That is for sure.

Senator Nickles. Would you agree with that?

Mr. Hartley. Absolutely. They are calling the shots and we are sitting there, and I think your statement that we are a ship in the water without any sails, captain or anything else is a pretty good parallel, because that is the way we are. We have to preserve our own industry during this period that the Saudis are having their fun and games. What their total game plan is, it is hard to say. It may be simply to reduce prices so that Iran loses cash-flow for its war effort. Who knows?

Senator Nickles. Don't you think the Saudis would have an adverse reaction to our having a fee?

Mr. Burtis. They might have an adverse reaction. I have a hard time believing that that would very much affect Saudi behavior. You have very much oversimplified it, but you have a very unusual situation where the marginal producer is the lowest-cost producer and he, for, whatever his reasons, has pushed 2 million barrels into the market that doesn't have a home. The market does work. It is a worldwide market and that is how it responded in the price.

But the fact of a fee imposed by the United States, I would be hard put to say I think it would much affect Saudi behavior. They have other things to consider.

Senator NICKLES. Senator Johnston.

Senator JOHNSTON. Thank you, Mr. Chairman. First of all, let me say, gentlemen, I very strongly agree with you that exemptions must be minimized; there certainly should be no exemptions for Mexico, Venezuela or Canada, because it would not reduce their market share or increase their cost; it would simply keep them at market share and cost where they are today. So, those would be totally unjustified exemptions, as in my view, would be home heating oil exemptions.

The only exemptions I could see would be for things, import for export, for example, which would be very limited in size and scope.

Mr. Burtis, you say we should rely upon the free market. There is a free market, some would say, worldwide in VCR's and in television sets, all of which today happen to be manufactured in Japan. Is there anything fundamentally different in oil and gas, that we should say, if OPEC, Saudi Arabia, or whoever, can produce oil cheaper than we can here, that if the market dictates that all of that production should be shipped overseas, that that would be acceptable to this country?

Mr. BURTIS. No. And I don't want to—maybe I made myself misunderstood. I really do believe that the health of the domestic industry is very important and I have always felt there is no reason why oil shouldn't be a commodity in international trade.

Senator JOHNSTON. There is something fundamentally different about oil and gas. It is a strategic commodity.

Mr. BURTIS. Yes, and we cannot afford to abandon the whole thing.

Senator JOHNSTON. Saudi Arabia is now producing about 5 million a day, with a capacity to double that without drilling any more wells, and probably a capacity to quadruple that with a drilling program not too ambitious in scope. Would you agree with that?

Mr. BURTIS. Saudi Arabia and probably Kuwait is somewhat in the same position.

Senator JOHNSTON. All right, now, they have it in their power, therefore, to reduce the cost, the worldwide price of oil to what degree, would you say?

Mr. BURTIS. Senator, I heard the other day that they have 643 wells, each of which produces a minimum of 10,000 barrels. They could probably get their actual lifing costs down to a couple of dollars.

Senator JOHNSTON. I think Sheik Yamani said something that $8 barrel oil would be within their contemplation this very day. Surely, they could do that, they could manage the free market to bring the price of oil down to $8 a barrel, if they wanted to, could they not?

Mr. BURTIS. I am sure they could.

Senator JOHNSTON. Now, if they had plans to do that, would then your view of an oil-import fee change, or should we say, let the free market dictate $8 a barrel?

Mr. **Burtis**. I tried to respond to Senator Nickles the same way; it is not so much a matter of the price, and there is a great attraction to the import fee, but, again, being impolitic, my experience tells me that what is mostly likely to happen—yes, it would raise a good deal of revenue, but any benefit that might accrue to this industry would soon be taxed away and we would end up about where we are right now.

Senator **Johnston**. Would you then—I disagree that that is what would happen, because if that is what would happen, it couldn't get the votes to pass. Those who feel that we needed this import fee feel we need the revenue first, and you don't get any revenue if you have it all full of exemptions, and it wouldn't preserve the domestic industry, which is a very big reason for doing this.

Do I, therefore, read you to say that an import fee, pure in form and not adulterated with other kind of taxes, like windfall profit taxes, would be a healthy thing for the industry and for the country?

Mr. **Burtis**. I think it would be, the short-term, I think the basic issue of a more coherent policy is still something that is most important, but, yes, to your question.

Senator **Johnston**. I think you and I disagree. We cannot rely upon the free market, upon the vagaries of whatever the Saudis' intentions are about $8 a barrel oil, or 20 million barrels a day production, which they might have a capacity to do. We can't rely upon that. So, an oil-import fee, properly structured and not, as I say, adulterated by a lot of other kinds of taxes, would be an effective way to produce, both short term and long term, produce revenue and preserve the domestic industry.

Mr. **Burtis**. And if it had a sunset, so it didn't go on forever.

Senator **Johnston**. Well, a sunset provision, for example, like, I think is in Senator Wallop's bill, would phase out the fee when the price of oil reached a certain amount—those kinds of phaseouts would make sense, wouldn't they?

Mr. **Burtis**. Yes, I think they would. I still can't completely abandon the notion that if you do that, then the consumer industry or whatever is in this country, is carrying an energy burden of some large increment above everyone else in the world. That has to be a problem in competitiveness.

Senator **Johnston**. Well, you know, a lot of things carry taxes and carry burdens, but if it is a strategic, important industry to preserve, then there are only a few ways to do it and one is to keep that burden. For example, you talk about the Strategic Petroleum Reserve, and others have as well, and I strongly agree with you. We need a Strategic Petroleum Reserve, but let us face it: the Strategic Petroleum Reserve is inconsistent with a free market.

If you believe in a free market, you don't want a Strategic Petroleum Reserve because you believe that market will work and bring the supply at the best price available worldwide, and an invisible hand is going to dictate that.

But we say, and you say, we can't rely upon that free market. We have a strategic interest in oil. We have got to have that Strategic Petroleum Reserve in times of not just embargo, but to use your statement, along with a clear resolve to use it when outside interests threaten our economic stability.

So, you say, have a Strategic Petroleum Reserve to moderate the price, or to moderate the supply shortage artifically manipulated by foreign forces. So you and I strongly agree on that. I suspect we strongly agree on incentives for the oil and gas industry. That is not the free market.

Some of our friends would say that is subsidy. Well, I want to tell you, I believe in that because I think it is very important to have a depletion allowance for the domestic oil and gas industry and to have a writeoff of intangibles. You just can't drill wells without it—you might not be able to drill them with it, but you sure can't drill them without it.

So, let us face it, we cannot rely upon a free market completely and totally. I am not saying let us go back to price controls—please, don't misunderstand that. But when you have a domestic industry that is in real danger of shutting down, closing up, and moving off, relatively permanently, then I say we had better do something and do it fast. Properly structured—and I emphasize properly structured oil—an import fee is the way to do it, and the only way to do it on the short term.

Thank you, Mr. Chairman.

Senator Nickles. Thank you, very much, Senator Johnston. We appreciate your interest.

Senator Evans.

Senator Evans. Thank you, Mr. Chairman. Senator Johnston started down a line of questioning that I was going to follow, and I will try to proceed a little further down that same line.

Mr. Burtis, I am not quite sure I know precisely where you are at this moment. In your testimony you say: "I urge you to resist the short-range temptation of an oil import tax and remove the consideration of it from America's agenda."

You did say in some of your comments that you feared what might happen, not necessarily what would be proposed as an oil import fee or tax, but what might happen with all the bells and whistles that could be added on either at that time or later on. Of course, that is a common political response when you don't want something to happen—not to speak directly to the issue, but what might happen sometime down the road, what this might lead to.

That is not what is at stake; that is not what is in front of us. I understood you to say in response to Senator Johnston that if those fears could be allayed, that if an oil-import fee was simple and straight forward with no exceptions, that you might consider it for a limited time. Do I understand that correctly?

Mr. Burtis. Yes.

Senator Evans. So that is really at odds with the written testimony that you submitted, at least to that degree.

Mr. Burtis. Again, I introduced that remark by saying it may be impolitic, but with the history of the last few years and the windfall profits tax would lead me to question and I hope I am wrong, that whether, when all is said and done, that really provided the kind of protection or support for this industry.

Senator Evans. I must say at this point, I am not sure whether I will or would not support an oil import fee. I am trying to find out more information on what the value, or the problems with it might be.

You have in many cases referred to the free market, but can there really be a free market when one producer can set the price almost precisely where they choose to set it? In your view, do the Saudis have the capability of virtually selecting a price and then by whatever manipulation in supply, make the world price come out pretty close to that figure?

Mr. **Burtis**. My own sense of it is that they started something in December. You may remember that a year ago, there was a story around that something like this would happen. They would flood the market, go to $18, stop and bring back. I think they started something they couldn't stop and I question whether or not anyone can precisely set price.

What in fact they can do, of course, as the lowest-incremental producer, put more product into the market and then, in fact, that is a worldwide market and that sets the price, obviously influenced by the amount oil in it. I think that is what has happened right now. Whether they have a target price, I have no way of knowing.

Senator **Evans**. Thank you. One of the things you mentioned is the negative results of an oil-import fee as it relates to economic activity, and you point up the 1-percent increase in unemployment cost, the Treasury, $25 billion, inflation and interest rates would be higher. In any analysis, have you attempted to place that against the potential economic problems and the tax losses and the unemployment losses that would occur? The domestic oil industry in this country is shattered from continuation of $13 to 14 oil.

Mr. **Burtis**. I have tried to make that specifically, and to be candid, I am always a little uncomfortable even in this, of those macroeconomic kinds of things. It is quoting a lot of economists and that seems to be the general result. Yes, I think, there are, as a matter of fact, some other things. The stone has been in the pond and the ripples haven't been felt yet in this industry.

Our company, for example,represents by most measures, about 2 percent of the industry. And every year, historicaly, we spend about $3 billion buying goods and services from other people. This isn't crude or anything of the sort. Now, as we and others start to cut back, there are some ripples coming that nobody has considered. So, it is not just in the oil patch; it is going to be in the steelmills of Pennsylvania, among other places, and I think there will be serious problems.

Senator **Evans**. Mr. Hartley, would you care to respond to essentially that same question? What, in your view, might be the balance between the potentially negative effects of an oil import fee and the negative effects on certain aspects of American industry of oil prices at the current level?

Mr. **Hartley**. I don't think there is going to be a great deal of effect on our society, whether we are talking $27 or $13.50, in the sense of the economy as a whole. People will change what they do with their consumer dollar. A dollar that can spend discretionary. They can spend all weekend driving when gasoline prices are cheap, or they can spend less time driving and use their money for other purposes—going to the movie or something. So that we are not changing, not taking anything away from the public.

You have cars now that get three times as many miles per gallon as they used to, and we certainly haven't got oil prices that are three times higher on a constant dollar basis, whether you are talking $27 barrel for crude oil or $13.50. So, I don't think that the concern for the average citizen is well placed.

I think on exports, we are supposed to be a high-technology country. I am not sure that is true any more, since we can't buy anything now that we see with our eyes or listen to with our ears that is made in the United States. But let's assume we still are a high-technology industry and the energy content of those things that we export is not very great. We don't export high-energy content steels, metals, and so on. As a matter of fact, we hardly even have a metals industry anymore. We put that out of action by other planned societies.

Remember now, we are being attacked by a planned society in Saudi Arabia. That is a society that makes the rules the way it wishes to make them and there is no argument. This ability of the Saudis to cut the price down to $5 a barrel and multiply their production by three or four times gives them the cash-flow to run their society the way they want to and still be able to buy elaborate 747's to ride around in and enjoy life. It won't hurt them a bit.

But the effect it is going to have on our society, and the people of Texas, Louisiana, California, Alaska—I would like the gentlemen from Alaska to recognize that we have stopped oil drilling in the Kuparak Field. You cannot drill the Kuparak Field today and make the investment in Alaska and produce oil from it. We are still running the field but how much longer, I don't know. We are down to $4.75 a barrel posted price. The rest of it is freight—Los Angeles or the gulf, and we are getting there between $11 and $12.50 a barrel. So Alaska has pretty much been knocked out.

It is the first big one to go because of it is physical location. I think it is a terribly serious situation for that entire northern State that we have in the United States.

I think that the effect that we are going to have on segments of our society are going to be traumatic. You have seen announcements of some of the companies—even the biggies are taking the position that they have more people than they know what to do with. Standard, on the west coast; Chevron has announced a 9,000-people layoff.

Our budget has been running around $2 billion a year on reinvestment. Reinvestment, of course, that is what creates jobs in our industry. We know we are down to $1.2 billion and we are going to have a big review again tomorrow. We have made three reviews here in the last 90 days. We made the review at $20, we made the review at $15, and we are going to make the review tomorrow at about $13.50, which is about what we think it is today. I suspect we are going to be down to about $1 billion of reinvestment.

As far as paying income taxes are concerned, we are out of the tax paying business and I hope we can turn it around to get back into the tax paying position. That is what our company is supposed to be for. We are not supposed to be running a charity—stockholders don't like that.

I think it all ties together, that the import fee puts us back and where the Arabs have put us back to anytime they feel like raising the price back up to $27. So, at least if we raise the price back up to $27 domestically, by placing an import tax of $10 or whatever it might be today—$12 today—against imports, we have put that revenue into the U.S. Treasury. We have put the machine back to work again. We will be paying windfall profit tax, again. We will be paying income taxes.

We are talking big money. We are talking something in the area of $40 to $45 billion that is happening here, and so, instead of that portion that we would be paying the foreign producers, whatever the import fee will be, at least we will be putting that in the U.S. Treasury, and I can think of at least three or four things that the U.S. Treasury could use the money for.

Senator **Evans**. Thank you. Just one question about using that money; just in developing an oil-import fee, in your view, would it be a rational thing to take some share of the revenues which come in from an oil import fee and set them immediately aside for the necessary continued filling of the Strategic Petroleum Reserve?

Mr. **Hartley**. Well, certainly if I had the authority to make that decision, the answer is, yes. I would certainly continue to fill the Petroleum Reserve. This situation is going to get worse. Doing what we are recommending slows down the inevitable. Hopefully between now and the year 2000, we are going to get smarter than the devil in this country.

We are going to develop technology, and we are going to be able to make liquid fuels out of coal, just as the South Africans are.

Senator **Nickles**. Senator Ford.

Senator **Ford**. I was enjoying Mr. Hartley's statement about getting as smart as South Africa, or Africa, and having synthetic fuels, make oil out of coal. Mr. Perrine will tell you that this administration shut down a pretty good process not too long ago, the H process, making oil from coal.

Mr. Chairman, I have just been sitting here listening and the arguments we are hearing today are about 180 degrees from the arguments we heard when they wanted to deregulate. Now they want to come back to us to put the fee on, to bring the prices back up.

The argument, early on, if we deregulate, we get more oil, people go out and drill and try to find it and prices would come down and we open up all the stripper wells—we paid that expense to go put the pumps on, and we get 280,000 barrels a day, I think now, from stripper wells. I think that is a pretty good little hunk. Now, we are saying close those stripper wells down, the price is so low we can't make it, so put an import fee on and save us.

It reminds me a little bit of my farmer friends who are in worse trouble than the oil industry. The low grain prices are causing a wailing and gnashing of teeth among the grain farmers, but livestock farmers are loving it. And now we are trying to get the dairy farmers to sell their herd and we will pay them for getting rid of it. You may have some additional beef on your table as a result of us trying to get them out of the dairy business.

Senator **Bumpers**. We have some contaminated milk in Arkansas, if anybody wants to buy it.

Senator **Ford**. That is right. We will give that away.

It just proves that when you mix milk with moonshine, you don't have any trouble.

There is something here that is bothering me a little bit, and Mr. Burtis tries to help a little bit. Mr. Hartley has the Trojan Horse theory and I agree a little bit with that, and Mr. Graves is going to shut down 150,000 to 160,000 wells, and things are just really bad.

Let me find out how bad they are. Mr. Graves, I haven't heard anything about closing any banks in California or Pennsylvania as a result of energy loans, but I hear a lot about Oklahoma, Texas, Louisiana—maybe our colleague here can tell us. What about banks in Oklahoma, for instance? Are any of them in trouble over the falling price of oil?

Mr. **Graves**. Of course, nothing of the magnitude of Penn Square, which was the summer of 1982. There have been small banks that have gone under this past year. I am certain though that most of the banks have energy loans in their portfolios that they would just as soon not have, and they are very concerned about what is happening. Banks are taking over operations of properties. That is going on in just unexpected number of cases.

To go ahead and manage the properties in this interim to see what is going to happen to the price structure. But there have been not a significant number of bank failures.

I noticed in the Washington Post yesterday that there were six large banks in Texas——

Senator **Ford**. Four in Dallas were put on notice that they were in trouble.

Mr. **Graves**. But, I would say this, the Oklahoma banks are very concerned.

Senator **Ford**. There was an estimate earlier by—as Harry Truman said—I wish we could get a one-arm economist so he can say—It is this way, and then on the other hand, it might be that way.

But, there would be 100 banks probably closing their doors in 1986 as a result of the declining oil prices. Does anybody at the table have any estimate about that?

Mr. **Hartley**. I wouldn't put it at an estimate of 100 banks, sir, but I would point out to you that banks loan money on collateral. Collateral is the oil reserves of the company they are loaning the money to. Quite obviously, collateral has now been cut by 50 percent or more, so that if they based their loan on 80 percent on the value of the oil reserves and made the financing accordingly, they no longer have the collateral to back up that loan.

Now, whether that is going to bring that bank into bankruptcy or not, I can't tell you, sir.

Senator **Ford**. I hear a lot of talk around here that—well, you just made a guess and you guessed wrong; you just take your lumps. I have a feeling that we ought to try—because of the importance of oil to this country——

Mr. Perrine, you talk about a clean bill, and the rest of the panel. A clean bill, that is a fee without exemptions, or if we have exemptions, be very limited exemptions, if any. Is that the judgment of all four of you?

Mr. **Burtis**. I would think so.

Mr. **Hartley**. It would be just as clean as if the OPEC had raised the prices by another $12.50 tomorrow morning and went back up to $27, again. Just as clean as that.

Senator **Ford**. You know what is going to happen, don't you, if this bill begins to move, about what the State Department will do?

Mr. **Hartley**. Well, I have had two opinions from the State Department, depending on who you talked to.

Senator **Ford**. Well, we talked to them this morning and got three—you are lucky.

They are going to do something about Mexico, and they are going to do something about Canada and they are going to do something about other countries and you are not going to get it through the House unless you exclude home heating oil, North East, and things like that. I wonder. It is getting to the point where we try to look after ourselves, but we are so dang interested in somebody else that we jeopardize our own.

How long will it take us, if all of a sudden we have an embargo, how long will it take after oil prices start zooming maybe up, for us to get back in the flow to start drilling, based on the information that we get on the rigs that are being stored and stacked and no additional finds are being sought? How long would it take us to get back into full production again, or seeking new energy?

Mr. **Hartley**. We cut our program in about 60 days because the cash isn't there to pay the bills. I can assure you if the thing turned around, whether by Arab action and going back to the price levels it was previously, or the action of Congress and the President signing the bill, we could go back and turn around in another 60 days in the other direction.

The seismics are all there, it all done. We have plans to go on year after year, so really, our workload and the rate at which we try to reproduce our company's reserves and give the company continuity is something that is going on all the time.

Senator **Ford**. Will this bring these little ones back? The so-called wildcatters, the small ones. Will something like that bring them back?

Mr. **Hartley**. You couldn't stop those fellows. They go wild the moment they can see a chance to make some money, they will be back.

Senator **Ford**. What I keep hearing is that it will take us 6 years, all these rigs are being mothballed, they are putting up, geologists are gone and everbody has gone to the four winds; they are gone now, and boy, it is 6 years. They come in here with crocodile tears. Then I hear 60 days.

Mr. **Hartley**. The geologists haven't gone anywhere except on relief.

Senator **Ford**. Mr. Graves. You said a while ago——

Mr. **Graves**. I would differ with Mr. Hartley to this extent; it probably would start again in 60 days, but it takes months and months and years for the momentum to build. Just look how long it took from the 1973 embargo until things reached the peak in 1980 or 1981. All you have to do is go to Stroud, OK, and look at the remains of the drilling rigs that are there that are being cut up for scrap iron.

The principal contractor there who deals in used equipment has 3 years of cutting, as he calls it, to cut the derricks of rigs. Oklahoma went from 880 rigs at the peak, and are now down to something less than 165 rigs today.

Now, those people are not standing by. A lot of them are disillusioned. They have gone into other businesses. They can't sit and draw unemployment and wait for oil to come back. I think it would take several years for us to regain the momentum that we have.

Senator **JOHNSTON**. If the Senator will yield, it also will depend on how long they are shut down, doesn't it?

Mr. **GRAVES**. Yes, sir.

Senator **FORD**. Dad always taught me to buy low and sell high. We find now that oil is low we want to stop buying—this administration. Wait until it gets up so we can buy high. There is something wrong with that philosophy. I don't quite understand it. While it is low, I think we ought to buy and I think you are absolutely right.

Mr. **PERRINE**. Let me make an observation, if you will. That same thing goes for domestic refineries. When a domestic refinery is shut down for any length of time, you can't just crank it back up again in 15 days and say—OK, now we are ready to run. A lot of those get dismantled, also. It is not an overnight deal.

Senator **FORD**. Thank you, very much, Mr. Chairman.

Senator **MURKOWSKI** [presiding]. Thank you. I am going to take advantage of two things; one, I assume I am next in line being acting chairman, why, I can take that prerogative.

Being from an oil-producing State, obviously I have more than a casual interest, but I think that it is fair and I think my friend from Kentucky touched on an inconsistency that I think needs further examination.

You gentlemen here represent your companies and a specific point of view concerned with your continued operations and prosperity, and obligation to your shareholders. The inconsistency is one, where at one given time the industry wants the free enterprise system flowing with little or no government control. Currently, we are in a crisis, so we are asking for some consideration. I think it is important to point out that there is less than uananimity within the industry.

That is unfortunate because it makes it that much more difficult for government to come up with any curealls. I am a product of the private sector and I firmly believe, as I assume most of you do, that you know what is wrong with your industry and you know what you need to get the proper medication. You are not going to necessarily get it from a government developing as a consequence of whatever your illnesses are a remedy. You have to come to government with what you need and you have to stand unified.

I think it is unfortunate that we don't have that situation now. We have major companies in the United States, international and domestic, that are not represented here for reasons of their own choosing. We have other companies that are represented very eloquently and appropriately because there are problems in the industry.

I sat through the chairman's gas deregulation hearings—I don't know whether we had 26 or 34 markups—to deregulate gas. There was no concensus in the industry and as a consequence, nothing was done, and that was indeed unfortunate.

Now we are talking about the merits of an oil import fee at the same time that the American consumer is basking in an unreal world of temporary low prices. But the conversations that I have had with industry groups indicate that some of the companies are not ready to specify an appropriate medicine to cure this situation. Unless there is, in my opinion, some uniform position from the industry on what the cureall is going to have to be, why, I just question whether the political realities are going to dictate that we are going to be able to get support for an oil import fee.

I think that the American consumer is very much exposed because when this situation turns around, as it will, why, he is going to have to bear the burden. It is an obligation of this committee to try and act with some foresight as a shock absorber against that reality. The idea, every time I hear of an oil import quota, why it is qualified because it doesn't have enough support here, or enough support there.

I am just wondering, gentlemen, since in your group even there is a difference of opinion as to the appropriateness of it. Is there any other avenue that would give you the relief for the assurance that we would maintain an exploration program, that we would maintain production capability based on some type of an incentive program?

As Mr. Hartley notes, with the decline in the price of oil, why the effect is an escalating effect, it is a domino effect, but is there any other way? You are suggesting, Mr. Hartley, that you would put an averge $22 to $27, and it comes up to that, and anything over that, why, there is a disallowance. Practically speaking, gentlemen in business, how do you get there from here, if indeed the public will not support, or government will not support what you propose?

Is there any other incentive program that is available?

Mr. **Graves**. Not that I am aware of, sir. As I mentioned earlier, one thing that we cannot tolerate in addition to the prices today would be an adverse tax reform bill that would further dismantle the domestic industry. That does not answer your question, but the only thing that I could think of right now, of course, thinking of Senator Boren and Senator Nickles' proposal that we have a top and a bottom, ceiling and a floor to it, and that is not the question you asked, but, no, sir; I know of no other alternative.

Senator **Murkowski**. Let me try it, specifically. If an import fee on crude oil is imposed, is it your intention it would be on top of the present regulatory tax structure, or should there be changes in the tax structure and the energy laws to offset, if you will, the placement of an import tax? Do you want to put it on top of everything else, or do you want to cut something and then put it in?

Mr. **Hartley**. The import fee, sir, is not a tax on the domestic industry.

Senator **Murkowski**. That is correct.

Mr. **Hartley**. It is a means of combating a very combative organization, known as OPEC and led by the Saudis, and they have made a determination for their political purposes to do what they are currently doing, to the detriment of the United States and the industry in the United States.

Senator **Murkowski**. That is true. But the public understands that we are only dependent on OPEC, as the United States, for 2 or 3 percent of their production.

Mr. **Hartley**. That is not true.

Senator **Murkowski**. Well, that is the figure that is given. Now it is not true in the sense of our dependency.

Mr. **Hartley**. You were not here when I gave my numbers, sir. It has gone up from 27,000 barrels a day in September; it was already up to 650,000 barrels a day.

Senator **Murkowski**. What percentage is, then, roughly?

Mr. **Hartley**. On imports, 650,000 barrels a day, sir, it is running pretty close to approaching 20 percent.

Senator **Murkowski**. From the Mideast?

Mr. **Hartley**. From Saudi Arabia, alone.

Senator **Murkowski**. I will stand corrected.

Mr. **Hartley**. These numbers are turning up so fast, because this thing is so dynamic, it is changing so quickly. I can't explain to you why some of our industry do not want an import fee. I am even suspicious of what their objectives are. Maybe they want some of us to go broke so they can buy up our properties for 50 cents on the dollar; I don't know.

All I know is that this is punishment my company can't take. Maybe if you have real deep pockets, you can hang around and change your whole modus operandi and become, in effect, a buyer of foreign crude and forget about the domestic. We can't.

Senator **Murkowski**. There are a lot of corporations that can. It is happening in other industries and we are all aware of the loss of market share throughout the country. We are still left with the dilemma of what we do and what we can sell.

As you point out, you can't explain why the other companies are not in here or are not taking the same position.

Mr. **Hartley**. I have asked them, sir. How low does the price have to go before the Arabs get your attention, and I get funny looks thrown at me by people. You almost think that they know something—that the Arabs are going to stop their game plan shortly and turn around and put it all back where it was, again. I don't know. Maybe they know that. Maybe I don't know it. I am not a member of the ARAMCO group, for example, who have direct contacts with the Saudis. I do not have those kinds of contacts.

All I know is the way things are today, the way it is going, is that there was a spigot that was turned against the cash flow of our company and all the other companies that operate.

Senator **Murkowski**. Let me pursue this line just very briefly. There is a windfall associated with your proposal on putting on an oil import tax—oil import fee. Obviously, the windfall is offset by providing you with an incentive to proceed with, whether it be the stripper wells, or the industry capability and the exploration program and so forth.

Now, the public pays that cost, in effect. Obviously, that is where it is offset. But the companies, the larger companies, perhaps, that are not as dependent as your company and other smaller companies, their attitude is obvious, that they are prepared to wait a while before they come in with any specific demands.

What we are doing is exposing the public either way to the cost of bearing what it takes to maintain a price support on an import quota, or the other alternative, when the whole thing turns around, the public is going to be faced with shortages, they are going to be paying increased prices. So they pay either way.

The second alternative is, everybody pays on that one. The first alternative, it seems to me, observing the state of the industry today, the smaller companies are absolutely dependent on some relief now, while the larger companies can bear it out for a while and they may be concerned with this being a temporary issue, or may turn around, but the public is going to pay either way. If we adopt the recommendations on the oil import fee, why, that is added on. Right?

Mr. HARTLEY. That is right, sir. The question is, is it short-term thinking, and your beliefs, and the long-term thinking and your beliefs? I am quite satisfied that the short-term thinking, to carry on as we are, without putting the import fee in position is going to mean the destruction of the United States—a good share and a good segment of the U.S. oil industry. It is going to affect the entire tax structure take of all of the States, and falls very heavily on Alaska. I am sure Alaskans are becoming very much aware—they will have an income tax there pretty soon. They are going to have to have something, because they are running entirely on their royalty revenues, as I am sure you are aware. When the prices are where they are, that is gone.

When this import fee goes into effect, that will put the windfall profit tax back into action for increased revenue for the U.S. Goverment, which, if you believe in democracy, means it is revenue paid to the citizens of the United States for the services that they want from their government.

So they are going to get that back. We are not going to get to keep all of the increase in the price. I am sure you are well aware of that. We are going to be paying taxes again and we are going to be paying windfall profit tax again, and I would propose that the import fee will vary in amount depending upon the actions that OPEC is taking. And at $27, it goes to zero. It is gone.

Senator MURKOWSKI. But basically you are able to maintain your activities because the Federal Goverment is providing a price support on an import fee, and I think you would share in a general sense the observation of most of us that the goverment's experience in price support programs have been disastrous. Under this scenario—I understand where you are coming from—I don't take exception to that.

There is a principle involved here of the industry saying—Government has to help us out. Well, the government has those obligations, but once the obligation comes, why, you get government mixed up in your business and the government says—OK, we guarantee you a price support up to whatever the figure is, and you know, there is a down side to that, as well, having that kind of involvement. An efficient operator that has an incentive, obviously, can handle a situation like that, but it provides for some that may develop slopping management techniques because they know that they have a support up to a price figure.

It is the principle that concerns me of what we are contemplating here and our experience, as a Government, in price support programs. I do not think there is a half a dozen Senators that understands the agricultural price support program in the Senate

now, it has gotten so darned complex. But that is neither here nor there.

Let me ask you another question, with regard to the tremendous volumes of oil on the West Coast now that I guess are coming down from Alaska—it is more oil than they know what to do with. It has been suggested, I think, by Mr. Burtis, who supports the free enterprise system, why do you not take the export restriction off and let some of it go to the Orient to maintain the price support and increase your wellhead price in Alaska?

Mr. **Hartley**. Then we have to turn around and buy some more oil from Saudis.

Senator **Murkowski**. Why? We can buy more oil from Mexico, Canada? Cut down the transportation. You do not have to buy from the Saudis.

Mr. **Hartley**. Mexicans only have so much oil, sir, and they are giving us half of their production. They have stated that to be their policy.

Senator **Murkowski**. I know, but there policies change in relationship to their indebtedness to us.

Mr. **Hartley**. You are going to dictate to them what they are going to be doing in the world—that is all right.

Senator **Murkowski**. I am suggesting, as an alternative, if we are looking at, one point, the free enterprise, let it flow and let the market dictate, and now you have more than you know what to do with, and you are interested in your wellhead price—that would certainly increase your wellhead price.

Mr. **Hartley**. Very, very, very little. I can assure you, sir, that the Japanese would pay no more money for Alaskan crude oil FOB Toyko than they will pay for the Saudi crude FOB, or the Iranian crude they are now buying.

Senator **Murkowski**. Even though the transportation costs are less?

Mr. **Hartley**. You are talking about a difference of a dollar a barrel at the most.

Senator **Murkowski**. I was told you were talking about $3 a barrel, but those figures I have been given. It would seem that we are talking about a departure in an industry that has been truly the stronghold of the free enterprise system, and that departure is a price support program which may be the only way out. I do not know. But I think as we consider the application of that principle, we should consider the long-term dictates of government as it develops. I guess my bottom line is, I do not want to see the industry lose its capability. I do not want to see the stripper wells go down.

I think we are setting ourselves up for a tremendous readjustment when we come out of this, but I am not sure that this is the only answer. It is the discomfort I have with the principle of price support. I would rather look to tax incentives, but you are absolutely right, if you don't have any income, you haven't got anything to charge against it.

Mr. **Hartley**. May I make a suggestion to you?

Senator **Murkowski**. Sure.

Mr. **Hartley**. It seems to me that we should look upon the import fee as a method of bringing stability back to our industry. While this predatory action on the part of the Saudis, in which it is fighting amongst itself and the other oil exporting countries, while it is settling its battle there and trying to bring them into its fold, the way it wants to dictate to them, in the meantime, at least we will protect our own domestic industry. I was quite satisfied that the final objectives of the Saudis is not to sell oil at $5 a barrel, or $10 or $12; the final objective is to do what they did once before and get it up to the point, as high as they can take it and still have a market.

That is where they are going to take this thing to. In my opinion, Yamani went entirely the wrong way. What he did was reduce the size of the economic pie of the value of exported oil from all of those countries and cut the price. If he had been smart, he would have increased the price of oil and made the pie bigger and then he would have had something to divide up amongst them. And that is where he is finally going to end up taking it, for sure.

Senator Murkowski. My time has expired, gentlemen. I just wonder what your attitude might be towards some type of an industry task force on the issue to make some specific recommendations.

Mr. Graves. Mr. Chairman, I still can't answer your question, but the independents, as you know and have stated, the independents are probably the most free-enterprised minded group of businessmen in the country. For many years, we have said that there is only three functions of government; deliver the mail, defend the coast, and restore 27.5 percent depletion allowance.

I will guarantee you, sir, we have compromised our principles when oil went below $20 a barrel. We need help. We are between the devil and deep blue sea. I can't decide right off which is the closes, the devil or the deep blue sea, but we are going to have to have some relief if the domestic industry is to survive.

Senator Murkowski. My last question, I do not think was answered: What is your attitude about an industry task force?

Mr. Hartley. I don't think it is possible. I was at the API meeting yesterday in Washington and they wouldn't even bring up the subject of the import fee for reasons that I find——

Senator Murkowski. How about an alternative? Other than an import fee—I know your position is an import fee. I am wonder if you would be willing to try to explore other alternatives.

Mr. Hartley. I will give you another alternative, if you want one, but you don't have any money. The United States is basically out of dough. You can give us back the windfall profit taxes we paid here over the last ten years since the tax has been——

Senator Murkowski. That would be fine, if we hadn't spent it.

Mr. Hartley. That is my point. How are you going to give a subsidy? You don't have any way of getting a subsidy. There is no revenue available.

Senator Murkowski. How about OCS leasing policy changes?

Mr. Hartley. You have to have money in order to be able to drill. We are approaching a point of zero profitability and our cash flow is greatly reduced, because what we are doing now, sir, is we are in an industry liquidation phase, to a great extent.

Senator Murkowski. Do you agree with that, necessarily?

Mr. Burtis. I was going to say, I can only speak for Sun, and I am sure not intending to liquidate and I don't think we are in anywhere near that condition. I think the matters of the OCS leasing, the capital provisions in the tax bill, the whole Super Fund thing are important. I must admit I am not expecting to have a lot of fun this year, or probably the next couple of years, but I think this company is going to make it.

But I think some of those things ought to be addressed, if it is nothing more than a matter of damage control. Let's try to get that straightened out. I recognize I have been a distinct minority here in being opposed to that fee and it is not an easy point to come to, but I just have to think in the long pull, at least for my company, I am better off taking my chances at being able to manage our way through this if we can get some of these other obstacles out of the way.

Senator **Murkowski**. You have no alternative suggestion specifically, other than what you have——

Mr. **Burtis**. There is no quick fix, sir; no.

Senator **Murkowski**. You don't think it is possible to pursue any industry type relief? What concerns me, and it is just an observation of the way this place works—unless there is a consensus, we have enjoyed the morning with you and your point of view, but I am sure you want something more positive than that to happen.

Mr. **Burtis**. The difficult thing in the industry, and I am not as active in API as I was—the API, for example, represents everything from the largest internationals to the smallest independent producer. We can agree on some kinds of motherhood things, but as you might expect, with that kind of—it is pretty contentious and you have a hard time on these tough ones.

Senator **Murkowski**. Well, maybe some of my colleagues can come up with some other alternatives. I want to turn to the chair over to Senator Chic Hecht. I just want to make one observation for the record. According to the Monthly Energy Review, in the last month's figures we have of December, it showed approximately 6 percent dependence on Arab-OPEC countries. It very well may be much more than that, but if it is as you suggest, why, it is alarming.

Mr. **Hartley**. The numbers in December were 672,000 barrels brought to American shores. Unless my sources are entirely wrong.

Senator **Hecht** [presiding]. Senator Bumpers.

Senator **Bumpers**. Mr. Hartley, do you feel that the financial liability of your company is threatened?

Mr. **Hartley**. Well, the answer to that question is, certainly it has not improved; for sure.

Senator **Bumpers**. How much of your production is domestic and how much is imported? The majority is domestic. Where are most of your wells? Louisiana and Texas?

Mr. **Hartley**. We are offshore Louisiana-Texas; we are also on the mainland of those two states, and Oklahoma.

Senator **Bumpers**. What is your annual production?

Mr. **Hartley**. We are in production on the west coast, in California. We were the originals discoverers of oil in Alaska, in the Cook Inlet Area. We do have some production in the Prudhoe Bay Area of Alaska, and the Kuparak Field, which, as I have indicated, all drilling there has ceased.

Senator **Bumpers**. What is the total production?

Mr. **Hartley**. We are doing about 155,000 barrels a day, domestically.

Senator **Bumpers**. Just a quick question, Mr. Burtis, for you. What is that same answer for Sun?

Mr. **Burtis**. We are primarily a domestic company and onshore, lower 48, about 150,000 barrels a day in Louisiana, Oklahoma, and Texas.

Senator **Bumpers**. Do you import any crude from the Saudis or anybody else?

Mr. **Burtis**. Yes; we import a lot of crude, but not from the Saudis. We have refining capacity of about 400,000 barrels a day.

Senator **Bumpers**. How much do you have to buy a day to fill that?

Mr. **Burtis**. We run domestic, not just our crude, 170,000, and so we buy 233,000 barrels a day of foreign crude; 30,000 of that from Canada, but most of our foreign crude comes from the North Sea and Mexico.

Senator **Bumpers**. Let me ask you, Mr. Graves, Mr. Hartley, and Mr. Perrine—you just have not had a chance to say very much.

Mr. **Perrine**. I know. I keep trying to steer the conversation around to refineries and we seem to be more interested—and that is the difference in this year, than last.

Senator **Bumpers**. Mr. Graves, Mr. Hartley, let me ask you this question: No. 1, the President of the United States right now has the authority to impose an import fee if he wants to. He doesn't need congressional approval, he doesn't need us to pass a bill. He obviously is not going to do that.

Second, he has said that he opposes an import fee. I suspect—this is just gratuitous—I suspect that that is a two-edged sword with the President. No. 1, he is opposed to increasing taxes; feels that he has made a commitment to the American people and that he can't condone any kind of a tax increase.

The other side of it is that I think the economy is humming right now because of these precipitous declines in the prices of petroleum.

You saw in the Post or the Wall Street Journal, or both, this morning that the growth rate in the last quarter of last year was seven-tenths of 1 percent; very, very low. Of course, you know, from my standpoint, I have to wonder when we are writing $213 billion worth of hot checks a year to maintain a seven-tenths of 1 percent growth rate, what are we going to do for an encore?

I think the President has found the encore in these precipitous declines in oil prices. The Joint Committee on Taxation says that a 5 percent decline—a $5 decline in oil prices raises the GNP by six-tenths of 1 percent. In a $4 trillion economy, that is a lot of money. But, my basic question is this: I am genuinely concerned about the domestic petroleum industry, but if you were in my position and, particularly as a Democrat, and the President is sitting in the White House saying, "Make my day," what would you do?

Mr. **Graves**. I would try to point out, there again, we have made various references to the shortfall and the longfall, and what is going to happen, you know, when once the Saudis get their way again, and this is just a little bit of insurance that is going to prevent, or could possibly prevent 1973 from happening all over again.

Now, in the Southwest, we say, sure; your brother-in-law doesn't have to spend as much to fill up his gas tank. That is the good news. The bad news is he doesn't have a job.

Also, it would be very nice for us, in the oil and gas industry, if we could buy tubular goods, if we could buy steel at bargain basement prices. Sure it is great for everybody if you can get something at a bargain basement price. Some of the bright young men at Treasury have been telling us that for the last year; that we have to learn to play on a level playing field with a free world market.

We point out that we are talking about American companies and independents, individuals, who are being forced to compete with government and countries themselves. There is no way that we could ever win that battle, and knowing what the average production is—as has been mentioned, the wells in Saudi Arabia compared with what the production is here.

But it is in the best long-term interest of the country to maintain a viable, stable domestic petroleum industry.

Senator Bumpers. I agree with you, Mr. Graves, but my question is: Should you not be making your plea down on 1600 Pennsylvania Avenue, and not to us? Why should we go through the ordeal and the trauma, and particularly if one is a Senator from a State who is 13 in per capita consumption of petroleum products and 49 in per capita income? The Joint Taxation Committee says that poor States really get racked by an import fee, even if they are not big users. If you make $10,000 or less, a $5 import fee is a 1.1 percent tax on you. If you make over $50,000, it is three-tenths of 1 percent. If you make under $5,000, it is a 5-percent tax.

I come from a very poor State. So, would you recommend to me, as sympathetic as I am to the oil industry, going out and waving the flag to put a 5-percent tax on the people of my State who make under $5,000, particularly when the President is sitting over there saying I will veto anything you send me.

Mr. Graves. Well, one thing, it is a lot easier to get in to talk to you fellows than it is to get in to talk to the President.

Senator Bumpers. I don't believe that. I have only been invited over there once or twice in the last 6 years.

Mr. Graves. The invitations are pretty scarce.

Senator Bumpers. I have asked to go a lot of times, but I have only been asked two times, and that is when he wanted to sell AWAC's to the Saudis, and something else.

Mr. Graves. We volunteered also. Senator Nickles did manage to get us in to see one time, and to tell you the truth, he was appalled and chagrined at Treasury, one, when we told him what was really in it and what the consequences would be. But knowing what the legislative process is, I think there is a better chance that a bill can be initiated in the House and Senate than it can up on 1600 Pennsylvania Avenue.

So, you are our only hope. We have no way of getting to the President.

Senator Bumpers. Well, join the fraternity.

Mr. Hartley. Senator Bumpers, with all due respect to the President of the United States, I think he suffers many, many times from lack of good information.

**Senator Bumpers.** You know, that is a curious thing. Anytime anybody disagrees with you, they say he is getting bad information.

**Mr. Hartley.** I believe he is because I don't think he understands, in the first place, that we have a predatory war going on. And I don't think he remembers what happened in 1973 and what happened in 1979 and 1980. I think that we are just in the middle of a struggle of forces here where the Saudis can have total disregard for market forces or anything else. They only have to take into regard their own desires and their own objectives.

If that means getting Libya into line, or Nigeria, or any of the other countries that are falling out of line in their gameplan to have a united control of the oil industry on a worldwide basis, if that isn't recognized as a predatory action and one which has to be met with equal action, then there is no hope for the United States nor the industry in the United Kingdom or anywhere else you want to name.

**Senator Bumpers.** Let me ask all three of you this question: My brother used to be one of those high-priced lawyers with Standard of California, and I was talking to him the other evening—he has been gone for several years from that company—but, he asked me the other night, "How do you enforce an import fee?"

He indicates to me, without going into lengthy discussion, that that is going to be very difficult to monitor. Is that a problem or isn't it?

**Mr. Hartley.** No; you go ahead and import 100,000 barrel cargo and you have established fee on imported crude at that time, and the same way we have to report all our imports, and so on, and in the future you would have to attach a check——

**Senator Bumpers.** What about crude that comes into Puerto Rico and is refined there and then sent to the United States? Would it be taxed at the Puerto Rican——

**Mr. Hartley.** I haven't studied that situation, sir, but we have to plug up all the loopholes—as far as the people who want to make a fortune out of the present dilemma of the United States.

**Mr. Burtis.** Well, I happen to run, I think, the only refinery in Puerto Rico, which runs on foreign crude, and I guess I have to disagree with Fred as to how simple this is. Because what we import to this country is a lot more than crude and a lot more than finished products. You have all kinds of intermediate stops and one thing and another, and if anybody thinks it is quite that simple, I can guarantee you, it is not.

It is a very complicated——

**Senator Bumpers.** I am hearing you. It seems to me like this is immensely complicated. I do not know—let me just assure all of you, and I want to say this in an exculpatory way, I voted against decontrol of the oil industry in this country—took a lot of heat from some very good friends of mine who are in the industry in my State, and I am not sure that I was not wrong about that vote, for a host of reasons.

I have had a lot of reasons to reflect on that since then. It was a conscientious, honest vote based on the simple proposition that the arguments that we needed to let the free marketplace work were spurious. There was no free marketplace then. The OPEC cartel was calling the shots.

The domestic industry, understandably, wanted those prices for their product and they got it. Now, of course, prices are down and the tables are turned; there is no free marketplace now. Your argument is absolutely correct now. There is not a free marketplace. It is largely determined by the cartel, even though they are in a shambles—you can pin it on the Saudis or whatever. But, I will tell you, in my opinion, this is a very delicate problem for two reasons: No. 1, an oil import fee is almost certainly going to slow down an economy that in my opinion is struggling right now.

On the other hand, unless we do something, this industry, in my opinion, is going to suffer very dramatically to the point that the biggest banks in Texas, Oklahoma, and Louisiana cannot survive. They have loaned billions and billions of dollars on the assumption that oil would never be below $25 a barrel. And I think yesterday's placing six of the biggest banks in Texas—Republic Bank, Texas Bank, Commerce—the biggest banks down there, on the watch list. This is not something the Controller General did. This is Standard & Poor's notice to subscribers that these banks are on the watch list.

But in my opinion, that is just the tip of the iceberg unless the oil industry gets some relief soon. I want you to know that I am sympathetic, I am ambivalent, but I am also like Senator Murkowski; I would like to believe that there were some other way than an import fee to do it.

Finally, let me reiterate that your argument right now is with the President; not Congress.

Thank you, Mr. Chairman.

Senator HECHT. OK. Senator Bingaman, and then I will follow you.

Senator BINGAMAN. Thank you, Mr. Chairman. Let me just ask the witnesses if you agree with Senator Bumpers—the premise of what he was saying, that an oil import fee will in fact have a dampening effect on the growth of the economy and that the drop in oil prices, the unchecked drop in oil prices is the main stimulant of the economy today. Do any of you have a comment on that?

Mr. BURTIS. For one thing, we seem to lose sight of the fact that oil prices have been dropping for 5 years, from the peak in 1981, and that that has had some effect on the economic history—you know, I haven't heard that mentioned very much.

What we see now is this very precipitous one and I find it hard to believe that you can see the effect on this economy as something that happened within the last 60 days. But then, I am not an economist, one-handed or other.

Senator BINGAMAN. You do not think the precipitous drop in the last couple to 3 months is what is causing the optimism for the rest of 1986, and causing the stock market to hit new heights?

Mr. BURTIS. I don't know what makes the stock market do what it does, but remember that part of the theory on the import fee is if you do it at the right amount and the right time, all you do is restore us to where we were last December and it should have no effect. I don't know whether that works or not.

As I said earlier, I think there are some effects that you have not seen yet. As exploration budgets start to go down, at least one part of the country—and maybe all parts of the country are going to be affected.

Senator **Bingaman**. Any of the others? Mr. Hartley, do you have an opinion on that?

Mr. **Hartley**. I think it has been quite over-exaggerated, the effect on the GNP. I think the euphoria that is going now is a fact that the value of the dollar has now got down to the point where perhaps we are going to have a chance to solve our lack of positive results in our balance of trade problem. We have been running negatives, as you know, at $150 billion a year. The Japanese are now being forced to raise their prices of their cars coming into the United States, so that there is less pressure on imports coming in and we have a better chance to export and that should increase then the size of the GNP on the basis that we are going to be able to do some business that we haven't been able to do.

I don't think the price of energy has got a thing to do with it.

Senator **Bingaman**. Well, that is an interesting point of view. Your information is that the change in the value of the dollar versus the yen is going to result in us having a lower trade deficit with Japan in 1986 than we had 1985?

Mr. **Hartley**. It certainly should start moving in that direction, yes. Unless they are simply going to close the door against us, totally, and solidly; take an OPEC attitude. Do whatever they want to do.

Senator **Bingaman**. We will both watch it. I will bet you it is not less than $50 billion next year; I will bet you it will be $50 billion plus in 1986.

Mr. Graves, did you have a point of view?

Mr. **Graves**. Yes, sir, Senator, in December, there was not widespread concern about the price of gasoline being too high. The general public has pretty well accepted what the price of gasoline and motor oil was at that time because it had come down so significantly since the heyday of the high prices.

I seem to think that a lot of the burst that has been evident in the economy is because, among other things, that there have been so many shelters that now have been completely put out of fashion—the real estate shelters are gone, the oil and gas investment shelters are gone——

Senator **Bingaman**. You are assuming that we pass one of these bills which is circulating around here—is that what you are saying?

Mr. **Graves**. Yes, sir I mean, it doesn't take the investor very long to figure out what is coming down the road for him.

Senator **Bingaman**. And that is how you account for the predictions of this Wall Street Journal article here, where you have economists saying that although we had a 2.2 percent drop in after-tax corporate profits, in 1985, we are going to have a 15-percent increase in profits in 1986. You think that is because of the expected passage of a tax bill.

Mr. **Graves**. I think it is because there is nothing left for the average investor now, except to buy stocks. The entrepreneurial type investments are going fast by the board, and there is nothing else for them to do. I think, yes, that there is a resurgence in popularity in buying stocks. I would point out, also, that the stockmarket was at an all-time high prior to the 1929 Depression.

I think that we are on a paper economy, that it is not real, that the service industries—we cannot become a service-oriented economy and refuse to produce hard goods in this country, which includes the extraction industries.

I think it is a bubble.

Senator Bingaman. Well, I tend to agree with you, but I also think that the administration decision to oppose an oil import fee is not based on bad information. I think it is based on a very calculated decision, that to endorse an import fee will likely stall the recovery and, therefore, we will go ahead and let the domestic oil industry——

Mr. Graves. Go down the tubes.

Senator Bingaman [continuing]. Go down the tubes in order to keep the recovery going. That is my own view of this thing. I think there is a very real tradeoff there and the decision has been made that we cannot have a continuation of this recovery if we do not allow oil prices to go ahead and drop——

Mr. Hartley. You are going to get me in a frame of mind where I am going to have to send Yamani a dozen roses and congratulate him for helping out economy.

Senator Bingaman. I think the prevailing view among economists that I have been reading is that in fact the price drop in oil has been a major spur to us and will be in 1986, and therefore, we do not want to do anything like you are suggesting—we, the administration, do not want to do anything like you are suggesting which might interfere with that.

I support an oil import fee and I think that the domestic oil industry is being sacrificed in this process, but I think if there is a window of opportunity to do something like you are recommending, it is closing quickly. Because once that price gets down and people see that reflected in the price of gas and it is built into all the economic projections that we have got—you said that you had revised your figures and you are going to have another meeting tomorrow to revise at the $13.50 per barrel price. Well, we are revising them in Government, too.

We are passing budgets around here on the assumption that the price of oil is going to be pretty low. The administration is making its projection and our monetary policy is being calculated on that. It is very difficult, month after month, to continue to contemplate jacking up the price of oil.

Mr. Graves. Excuse me, sir. I have heard so much about the tax reform and how revenue neutrality, of course, is going to be one of the main concerns. Everything that I have seen is anything but revenue neutral as far as the oil and gas industry is concerned. There are more devious ways to increase the taxes to the oil and gas industry.

Just to comment on economists—I just read the other day that the best thing economists are for is making after-dinner speeches. We have gone everywhere from $100 a barrel—you remember all of that? That there was no way that it was going to go anywhere but up to $100 a barrel and that is the reason that everyone is in such a debacle now.

But, remembering, as you said, the more people get used to the lower prices—and then if there is any kind of increase, guess who is going to get the blame? The domestic oil and gas companies.

Mr. **Hartley**. Sir, let me make a comment. The OPEC countries—let's call them the exporting countries, in total—who are united and in effect had a common marketing effort on their part, with their production controls. They got the prices up to where they wanted them and the nominal Saudi referenced crude price was between $34 and $36 a barrel was about the range for a number of years, after we got off the $40 and $50 barrel kick—which was spot prices, not Saudi prices.

The world responded to that dictatorship of the marketplace and not only in the United States, where we all drilled hard and worked hard and had more properties made available to us in the offshore, and built the big Alaska pipeline, and made all sorts of investments to do something about it. We had a great shifting from oil to coal in order to make use of that good energy source for the production of electric power, and we also did a tremendous job from the point of view of industry and the public—there is a lot more home insulation, we had to impose on Detroit and mandated some miles per gallons on their cars in order to get their attention and get that job done—and they are turning out better cars today then I think they ever have in terms of performance, with much less fuel consumption.

Well, we did too good a job. We got the UK up to the point where, until recently, the UK's production, as you know, was greater than Saudi Arabia's. We did that job in the framework of a price level of energy of around $30 a barrel. To suddenly have that kicked from under us, again, by the same people who pushed the price up to $34 a barrel, all the way from $3 a barrel in 1973, only—that is when the big price change took place—If we are going to sit around as a nation, and all the other countries that have invested money and let themselves be dictated to by the OPEC cartel so that our energy plan is entirely put out of commission, our conservation ethic is destroyed, only to get us to the point where we become weak again—It is because we became strong in the Western World, in relation to OPEC, that we did get production up, we did get demand down by the things we did.

And, that created a drop in production of OPEC of 10 million barrels per day. Their pie got smaller, and they got this horrible problem of having OPEC countries with high population and low population. You know, the highest standard of living is not in the United States; it is in Saudi Arabia, on a per capita basis. Kuwait, I guess, is even higher.

We are letting ourselves be dictated to by a force that can destroy, let us sit there and rot and after we have deteriorated in supply and deteriorated in increasing our consumption because we have this low-cost Trojan Horse into our lands, then they can turn right around again and put those prices right back to wherever they wish to. And we are right back to where we were before, and I think that it will even much worse.

I think the mistake they made was in reducing the price of oil at this point in time, because all they did was make the cash coming out of the oilfields of OPEC less cash. It gives them a much tougher job of dividing up the spoils of oil production in their areas. That is what they are all sitting over there in Geneva fighting about right now.

If they had gone the other way and increased the price of oil, with lower production, they would have made the pie bigger and they could have had a much easier job of dividing up the production quotas to each of the countries.

So, what the Saudis are now doing is forcing the issue to make their pie bigger by giving them a greater share of the world market—they, and other members of OPEC—by destroying our will to produce and to conserve and to maintain some degree of energy independence.

I am always amazed that we are such a sloganized country. Not very many years ago, sir, all we talked about was the energy independence of the United States. Now we are in a period where you are telling me that the President of the United States is delighted to see the oil industry go down the tube——

Senator BINGAMAN. I am telling you—he is not delighted to see that, but he is sure delighted to see the stock market going up, and he does not mind seeing projections of increased GNP this year, and I think all of that to an extent, in the eyes of administration economists, hinges upon the low price of oil that is now being enjoyed.

So, I may be misreading it, but——

Mr. HARTLEY. I think that our economy, sir, is based on our expense expenditure level for which we are not paying money for; we are borrowing it from the Japanese to pay for it.

That is why we have just a big boom going. You kick the props out from under that, and you are going to see the economy go right down to nothing.

Senator BINGAMAN. I agree with that, too. We are practicing super-Keynesianism, and pumping a lot of money in that we do not have.

That is all I have, Mr. Chairman.

Senator HECHT. Thank you. I just have a couple of questions. Mr. Hartley, your statement that I was fortunate to hear this morning was one of the finest I have heard, and with your permission, I would like to quote from different parts of it, especially the Trojan part.

In the past 2 weeks, I sit on the Intelligence Committee and I have had a lot of briefings on the Banking Committee, and Secretary Kissinger has spent a lot of time with us, Secretary Schlesinger—you have a way of putting the best case for an oil import fee that I have seen. I was happy to be here this morning and hear all your comments.

Mr. HARTLEY. I thank you for that. We worked hard, believe me. I guess it is because we are a bit frightened, to tell you the truth, of the consequences not only to our company, but also to our country. We have all been before, you know. This is not the first war we have had against us by the OPEC team.

Senator HECHT. I wish you would put this out to different newspapers.

Mr. HARTLEY. We are making releases to the press today. In fact, they have already gone out, sir, while this meeting is being held. I hope it does get some coverage. I hope some of my competitors listen to it, or read it.

Senator HECHT. Well, I am going to quote from it, if that is okay. I will give you credit for it.

Mr. HARTLEY. Thank you, very much.

Senator HECHT. Let us go on the next panel. Thank you, all. We will have panels 2 and 3, and have all witnesses appear together.

Panel No. 2, Mr. George McNally. Do you want to start, please?

## STATEMENT OF GEORGE J. McNALLY, PRESIDENT, BORG-WARNER CHEMICALS, INC.

Mr. McNALLY. Mr. Chairman and members of the committee, my name is George McNally. I am president of Borg-Warner Chemicals, Inc., headquartered at Parkersburg, WV. Thank you for allowing me to testify.

I share concern expressed earlier about the health of the domestic oil industry. Oil companies are our suppliers and we are in essence their salesmen. If we and our customers cannot produce competitively, the domestic oil industry, as well as the U.S.A., will lose worldwide market share.

I am also deeply concerned about the competitiveness of American manufacturing in the global economies as they are now evolving and I think we have to introduce the subject of who are the competitors and where is the competition taking place? And what are the fundamental worldwide changes in manufacturing that are taking place?

So I appear on behalf of more than 1,800 companies in the chemicals, plastics, and fiber industries to oppose an oil import fee. An oil import fee would not only hurt our industries, it would be felt throughout the entire manufacturing section of the country. It would cost the working people of American jobs by making imported products more attractive to consumers.

It would severely damage the ability of the United States to compete in world markets, and it would cost the Government substantially more than the revenues brought in from the tax. An oil tax would hit the industries I represent twice because we use petrochemical products as raw materials, in the same way the steel industry uses iron ore.

Our fuel costs and our petroleum raw material costs would both go up. Now, the industries I represent and those industries that consume substantial quantities of our products account for 31 percent of all U.S. manufacturing and 36 percent of U.S. exports. The chemical industry is the only exporting industry with a positive balance.

U.S. manufacturers are going to be put at a severe competitive disadvantage by having their fuel costs pushed up above that of their foreign competitors, especially at a time in history when we can least afford it.

Over the past 5 years, America has been losing the manfacture of many products, from telephones and clothing, to automobiles and business machines. The chemicals, fibers and plastics markets are world markets. U.S. products containing petrochemicals, including textiles, automobiles, fertilizers and pesticides, tires and pharmaceuticals and paints are already under severe competitive pressure in domestic and foreign markets.

For example, between 1982 and 1984, imports of finished plastic products doubled. Imports of plastics resins during this same period tripled. During the 5 years, ending in 1984, chemical imports grew at 11 percent a year. An energy tax would further erode our competitive position.

It certainly makes no sense to do with energy taxation what we seek to prevent in our trade policy.

Let me emphasize one significant point, however. It is not necessary at all to subsidize American industry. It is necessary to ensure the opportunity to compete on an even basis. If American manufacturing is to survive in the decade ahead, we must be allowed to compete in global markets on as equal a footing as possible. I believe a tax on oil could be the single most devastating blow to that goal.

We are participating in a major dislocation of economic power throughout the free world. One consultant I have recently talked with indicated that since World War II, America's share of total worldwide manufacturing has decreased from 50 percent to but 17 percent.

An oil import tax has several disadvantages. The business community is concerned about deficit reduction but we feel an import tax is not a reasonable way to increase Government revenues. Table I attached to my prepared statement shows why. A $5 barrel tax on imports will generate about $10 billion. However, a new data resource study shows reduced economic activity, increased unemployment and higher inflation generated by the tax will raise Federal, State, and local government costs and reduce their revenues by $21 billion.

As I said when I started, I am very concerned about the health of the domestic oil industry. They are our suppliers and we need them desperately. But they, in turn, need healthy customers, such as ourselves, who represent them successfully in domestic and world trade.

In 1973, over 40 percent of our petroleum needs were met with imports, almost one-half of which are from the Arab OPEC countries. Developments of the last 12 years have been very beneficial to America. Imports now comprise only one-third of our total demand, and only 7 percent of total demand comes from Arab OPEC countries, a significant change.

Middle East oil has been replaced by oil from Canada, Britain, Venezuela, and Mexico. An oil import fee, without exceptions for those countries, would hurt their sources of supply.

Now, since we can't possibly stop importing oil any time in the foreseeable future, it seems to me that maintaining our secure foreign supplies is essential. But my most important message today is that an oil import tax would be a body blow to U.S. manufacturers. If we lose our basic manufacturing industries by essentially subsidizing foreign producers, the Nation's security certainly will suffer. Jobs will decline, our balance of trade will suffer.

I do urge the committee to look carefully at proposals which have been made to directly address the oil industry's problems. We would support removing Government burdens, such as national gas price controls, windfall profit taxes, and incremental gas pricing.

I understand that many, if not most producers you have heard from already favor this approach over an import tax. I wouldn't have any doubt that if there was someone from Taiwan or Korea sitting in the back of the room today, listening to our conversation about imposing an oil import tax, which would give them a 10- to 30-percent advantage over our cost of manufacturing, would be absolutely jumping for glee, so that they could continue to penetrate the American market.

In conclusion, I urge you not to support an oil import tax. We are convinced that such a tax would create far more serious problems than it will solve. Thank you, very much.

[The prepared statement of Mr. McNally follows.]

# TESTIMONY OF GEORGE J. MCNALLY
ON BEHALF OF
THE CHEMICAL MANUFACTURERS ASSOCIATION,
THE MAN-MADE FIBER PRODUCERS ASSOCIATION,
THE PETROCHEMICAL ENERGY GROUP,
THE SOCIETY OF THE PLASTICS INDUSTRY, INC.

Committee on Energy and
Natural Resources
United States Senate

Washington, D.C.
March 20, 1986

## TESTIMONY OF GEORGE J. MCNALLY ON BEHALF OF THE CHEMICALS, FIBERS AND PLASTICS INDUSTRIES

### EXECUTIVE SUMMARY

1. The chemical, petrochemical, fibers, and plastics industries oppose a tax on oil, especially an oil import fee, whether for Federal budget deficit reduction, tax reform purposes, or for claimed national security reasons.

2. An oil import fee will reduce GNP and increase inflation and unemployment.

3. Oil taxes are a particularly inefficient way to raise Federal revenue. As a result of the reduced economic growth, increased unemployment and higher inflation generated by an oil import tax, such a tax would have a negative impact on the combined budgets of Federal, state and local government.

4. It is likely that some exemptions from an import fee would be granted on the basis of domestic and foreign policy considerations, leaving even the Federal government with a negligible net revenue gain from an import tax.

5. The chemical, fibers, and plastics industries will be hit twice as hard as U.S. industry generally, since our industries use oil and gas and their derivatives both as raw materials and as fuels.

6. An oil import tax will place domestic manufacturers at a competitive disadvantage against foreign imports as well as in foreign markets.

7. Not only would the plastics, fibers and chemicals industries be affected, but since they produce the basic industrial building blocks for many other industries, these downstream industries also would be adversely affected by an import fee.

8. Basic petrochemicals, plastics, and fibers are also materials vital to our national security.

9. Our industries oppose reregulation of U.S. energy markets. Deregulation initiatives have benefitted both individual and industrial consumers. An oil import tax will be the first step toward a return to massive government intervention in U.S. energy markets.

## TESTIMONY OF GEORGE J. MCNALLY
## ON BEHALF OF
## THE CHEMICALS, FIBERS AND PLASTICS INDUSTRIES

Mr. Chairman, members of the Committee, I am George J. McNally, President, Borg-Warner Chemicals, Inc. Today I appear on behalf of more than 1,800 companies in the chemical, petrochemical, fibers, and plastics industries 1/ to oppose a tax on oil, especially an oil import fee, whether for federal budget deficit reduction, tax reform purposes, or for claimed national security reasons. Oil import taxes would:

1. cost government substantially more than the revenues they bring in;
2. seriously impair economic growth;

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1/ Mr. McNally represents the following associations: the Chemical Manufacturers Association: (CMA) is a non-profit trade association whose member companies represent more than 90 percent of the productive capacity of basic industrial chemicals within the United States; The Man-Made Fiber Producers Association, Inc.: (MMFPA) is a non-profit trade association of the producers of over 90% of all synthetic fibers produced in the U.S. Man-made fibers constitute 75% of all fibers used in the U.S.; The Petrochemical Energy Group: (PEG) is an ad hoc group of U.S. independent petrochemical producers responsible for a substantial share of U.S. petrochemical production; and The Society of the Plastics Industry, Inc.: (SPI) is a trade organization of more than 1,800 members representing all segments of the plastics industry in the U.S. SPI's membership is composed of resin manufacturers, distributors, machinery manufacturers, plastics processors, mold-makers and industry-related categories.

3. devastate the international competitiveness of the chemical, fibers and plastics industries and export American jobs; and
4. mark a return to massive government intervention into U.S. energy markets.

DEFICIT REDUCTION

Recent studies by Data Resources, Inc. (DRI) for CMA and PEG show oil taxes are a particularly inefficient way to raise federal revenue. A $5-per-barrel tax on oil imports will generate approximately $10 billion in revenue for the Federal Government. But reduced economic growth, increased unemployment and higher inflation generated by the tax will result in a combined increase in costs and decrease in revenues for Federal, state and local governments of about $21 billion/year. This tax would damage the economy and have a negative impact on the combined budgets of all levels of government.

The revenue from an import fee will undoubtedly be further reduced by exemptions from the tax for home heating oil, transportation fuels, agricultural uses, and imports from Mexico, Canada, Great Britain, and Venezuela, among others. The percentage of U.S. imports just from the four countries named is 50.5 percent of total U.S. petroleum imports, broken down as follows: Canada - 15.2 percent; Great Britain - 6.4 percent; Mexico - 16.7 percent; and

Venezuela - 12.2 percent. 2/ The Joint Committee on Taxation estimates that a $5.00-per-barrel tax on imported crude oil and petroleum products, with no exemptions, would raise $7.4 billion in fiscal year 1987. 3/ Providing exemptions just for the four countries named above would result in a lowering of net tax receipts to approximately $3.7 billion. The reduction in Federal tax receipts could be even greater if, as a result of the comparative cost advantage enjoyed by these fee-exempt countries, they increased their share of U.S. crude oil imports.

The Joint Committee on Taxation also reports that if rebates were provided for home heating oil and industrial petroleum use, 90 percent of gross revenues from an import fee might be lost. 4/ Even if the tax were applied to all oil, both domestic and imported, the DRI study concludes net revenues would only be about 25 cents per dollar of tax.

In addition, the DRI simulation of a $5/bbl oil tax shows real GNP, investment, disposable income and U.S. exports would go down significantly as compared to the "no tax" case. The ironic result of an oil tax will be to cause

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2/ Energy Information Administration, Monthly Energy Review, October 1985 (January 26, 1986), pp. 42-3.

3/ Taxation of Petroleum Imports, Prepared by the Staff of the Joint Committee on Taxation, February 26, 1986, p. 30.

4/ Id., at 31.

serious economic harm, although it is intended to strengthen the economy by shrinking the deficit.

OUR INDUSTRIES DOUBLY IMPACTED

The industries I represent today will be hit twice as hard as U.S. industry generally. This is because oil and gas and their derivatives are used as raw materials in these industries in the same way the steel industry uses iron ore. These industries are also energy intensive in their fuel use, despite massive strides in conservation during the last 10 years. For basic petrochemicals such as ethylene, feedstock and energy costs run about 75 to 85 percent of total production costs. 5/

An oil import tax will make it highly disadvantageous to produce our products in this country. We will be unable to compete in foreign markets with producers who have no tax on their energy and raw materials. An import tax would also flood the U.S. market with imports from foreign producers of chemicals, plastics, fibers and finished products who have no tax to increase their production costs. The result will be lost production, shut down facilities and lost jobs.

These industries are all international in scope. It's really pretty simple--assuming an oil price of $15-20 per barrel, an import tax on crude or products of $5-10 per

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5/ An Investigation of the Impact of Energy Taxes on the Economy, Data Resources, Inc., March 12, 1986.

barrel would mean a U.S. competitive energy and feedstock cost disadvantage of 25-67 percent. This is an impossible burden for any industry to bear--particularly ones involved in intensely competitive international markets.

The number of jobs on the line is tremendous. Look at the plastics industries, for example. U.S. direct employment among companies making plastics products is more than 900,000. Another 1.1 million jobs are required to provide raw materials, machinery and other supplies. These two million jobs created by the U.S. plastics industry account for 7.5 percent of the U.S. manufacturing workforce.

A DRI study of a $5-per-barrel import tax done for CMA last year 6/ indicates the tax will cost 15,000 chemical industry jobs each year during the five-year period studied. More than 200,000 7/ jobs in basic industries will be lost each year; and 600,000 jobs 8/ would disappear in the overall economy.

## CHEMICAL DEPENDENT INDUSTRIES

But the impact of higher chemical costs does not stop with the chemicals, fibers and plastics industries. These materials are basic industrial building blocks. Plastics, fibers and chemicals are essential materials for

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6/ Id.

7/ Id.

8/ Id.

the automobile industry. Chemicals are used for fertilizers and pesticides by the agricultural industry and as food preservatives in the food industry. Plastics and fibers are also used as packaging in the food industry. Chemicals, plastics and fibers are used for home construction and furnishings. The list goes on and on.

A study by the consulting firm of Arthur D. Little, Inc. found that 31 percent of all U.S. manufacturing industries are significantly dependent on the use of petrochemical products. 9/ As prices for these products are forced up by oil taxes, the production costs of all of these downstream U.S. manufacturing industries will be forced up as well. In time the downstream industries may buy their chemicals, fibers and plastics offshore. But buying supplies abroad can increase costs and decrease reliability of supply. If U.S. manufacturing industries are forced to purchase their chemical materials from abroad, in time we fear they will move their plants and jobs abroad, too.

Some have urged a tax on imported oil as a national security measure. But we urge you to consider the adverse impact on national security if our basic petrochemical, plastics and fibers industries are forced overseas. Petrochemical-based synthetic and plastics materials are

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9/ 1983 Petrochemical Industry Profile, prepared by Arthur D. Little, Inc. for the Petrochemical Energy Group, September 1, 1984.

used in aircraft, rockets, military vehicles and weapons. Many of these materials must be produced according to very high quality specifications for sensitive military applications. The danger of losing these basic industries as a result of taxing petrochemical feedstocks should be seriously considered by any who favor an import tax as a contribution to the nation's security.

## THE STRUGGLE TO STAY COMPETITIVE IN WORLD MARKETS

The chemicals, fibers and plastics markets are world markets. U.S. products containing petrochemicals, including textiles, automobiles, fertilizers and pesticides, tires, plastics, pharmaceuticals, and paint and coatings are already under severe competitive pressure in domestic and foreign markets, as the attached tables show. For example, between 1982 and 1984, imports of finished plastics products doubled. Imports of plastics resins during the same period tripled. 10/ During the five years ending in 1984, chemical imports grew 11 percent a year. 11/ An energy tax will further erode our competitive position. It makes no sense to do with energy taxation what we seek to prevent in our trade policy.

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10/ U.S. Imports, Consumption and SIC-Based Products by World Areas, FT210/Annual 1982 and 1984, U.S. Department of Commerce, Bureau of the Census.

11/ CMA News, February 1986, p.4.

The U.S. chemical industry, including plastics, resins and man-made fibers, is the only major process industry that exports more than it imports. In 1985 the chemical industry employed more than one million people, invested $17 billion in new plants, and provided a positive foreign trade balance of $7.6 billion. 12/ The industries that consume petrochemicals are also vital to the U.S. trade balance. Arthur D. Little, Inc. estimates that 36 percent of U.S. exports are petrochemical-dependent products. 13/ We are fighting to keep our industries competitive. We ask you not to subsidize our foreign competitors by imposing a tax on our raw materials.

Suggestions have been made that some form of basic petrochemical tariff or rebate would eliminate the negative impact on our industry of an oil tax. In our judgment, this would be not only complex but ineffective. Protection at the petrochemical level, for example, would simply drive the problem of increased imports downstream to tires, plastic products, or other finished products.

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12/ Id.

13/ Trade Trends in Petrochemicals: 1983, A Report to the Petrochemical Energy Group by Arthur D. Little, Inc., August 1984.

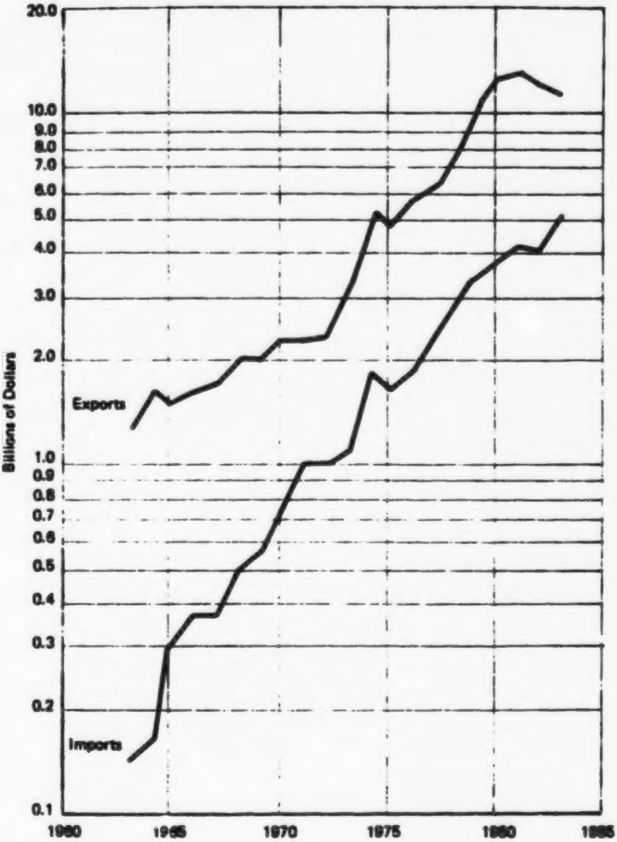
## RETURN TO GOVERNMENT CONTROLS

Our industries applauded President Reagan's decision in 1981 to end government controls on oil prices. And we have supported the President's call for total deregulation of natural gas as well. Other deregulation initiatives have brought competition to energy markets that have benefitted both individual and industrial consumers.

During the 1960s and 1970s when an oil import quota was in place, year by year the government staff managing the program grew larger, and the pages of federal regulations became more numerous and complex. If the past is any guide to the future, an import tax will mark a reversal of deregulation and a return to massive government intervention in U.S. energy markets. Exceptions will favor certain industries and certain regions. Our industries' ability to compete will be more a function of our skill in Washington lobbying than our ability to produce products at competitive prices. If there were no other reason for our industries to oppose an oil tax, this would be reason enough.

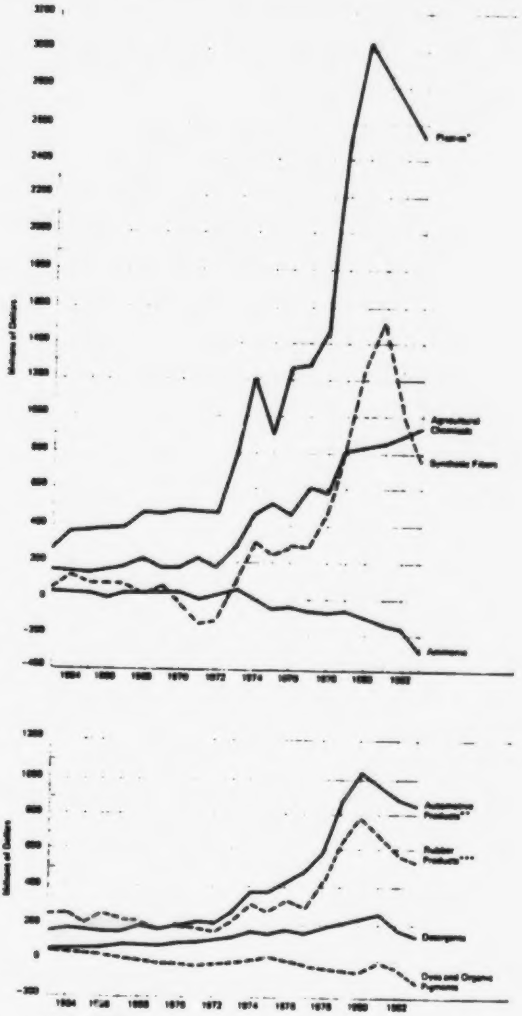
Surely, rendering our manufacturing industries uncompetitive and returning to massive federal intervention in U.S. energy markets will be bad for national security and impede meaningful federal budget deficit reduction. We are convinced that an oil tax will create far more serious problems than it will solve, and we urge you to oppose any such proposals.

U.S. IMPORTS AND EXPORTS OF PETROCHEMICALS



Source: U.S. Department of Commerce, Bureau of the Census, FT110 plus FT135 U.S. Imports, FT410 U.S. Exports. See Appendix A-1 of this report.

**U.S. PETROCHEMICAL TRADE BALANCE BY PRODUCT CATEGORY**



*Includes Plasticizers.

**Includes gasoline additives, lube oil additives, and hydraulic fluids.

***Includes synthetic rubber, carbon black and rubber chemicals.

n.e.s. = not elsewhere specified

Source: U.S. Department of Commerce, Bureau of the Census: FT110, FT135 Imports, FT410, Exports. See Appendix A.2 of this report.

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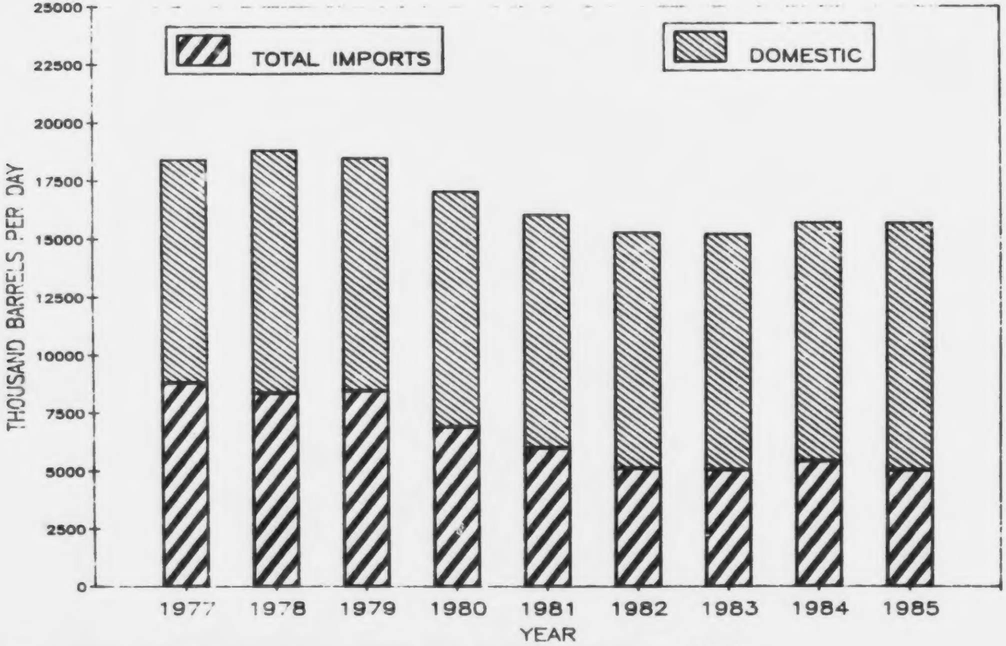
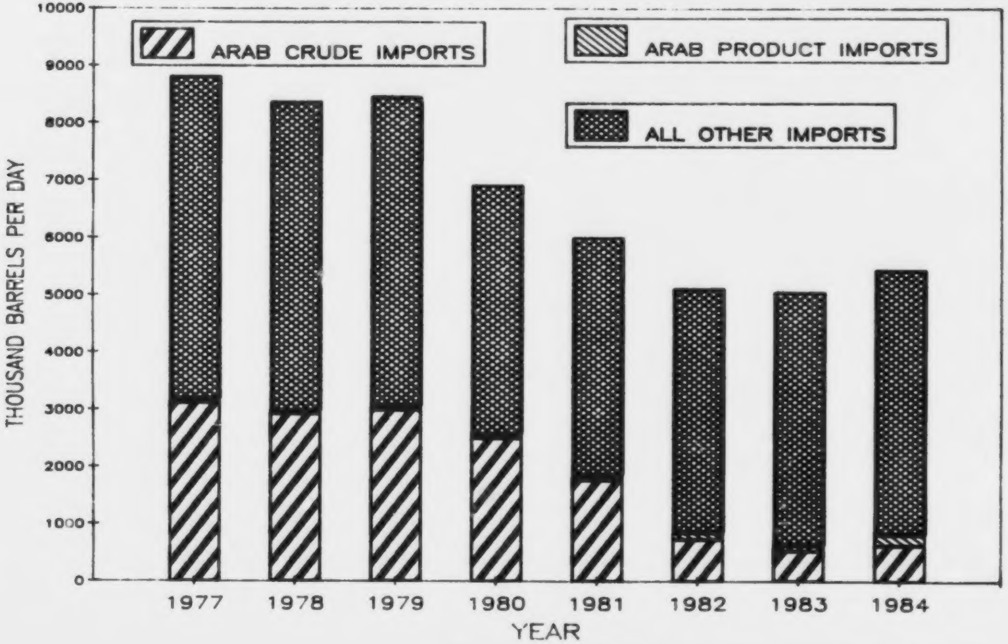
## TOTAL U.S. CONSUMPTION OF FOREIGN AND DOMESTIC PETROLEUM



Source: Monthly Energy Review, DOE/EIA, November 1985, published Feb. 1986.

## ARAB OPEC IMPORTS AS A PORTION OF TOTAL U.S. PETROLEUM IMPORTS



**Source: Petroleum Supply Annual, DOE/EIA, 1981–1984.**

Senator **Hecht**. Thank you, very much.

Mr. Clements.

## STATEMENT OF JOHN A. CLEMENTS, PRESIDENT, NEW ENGLAND FUEL INSTITUTE

Mr. **Clements**. Thank you, Senator Hecht. I am appearing today as president of the New England Fuel Institute, and without objection, Mr. Chairman, I would like to submit a copy of my full statement for the record.

Senator **Hecht**. It will be in the record.

Mr. **Clements**. Because of time constraints, I will only take some excerpts from it.

Senator **Hecht**. Thank you, very much.

Mr. **Clements**. We are an association of about 1,000 independent marketers of heating oil in New England. I am sure you recall, Mr. Chairman, that New England is probably that bastion of where most import relief requests come from, starting with textiles and shoes, and high technologies and ball bearings, all of which were universally turned down. So I come here today as a native New Englander somewhat amused to some extent, although it is a very serious situation, that this import situation that occurred now with petroleum is visiting once again, and here, New Englanders that have conserved so genuinely over the past few years and have learned how to replace aging smokestack industries with high-technology industries, and have learned to do with less energy are now being called upon to pay the price twice through some sort of an import fee.

We have the kind of true Yankee style I think that we were urged on by this Congress and other Congresses to have and I guess my first reaction is that I would like to see some of the oil patch States that are now being adversely affected have the true grit that they told us to have back a few years ago and weather this for a few more years to see if the marketplace won't do the job.

I am testifying today on behalf of ad hoc coalition of petroleum marketers opposed to import fees or other barriers to imports, in addition to NEFI, which I directly represent. This coalition includes the Empire State Petroleum Association, the Pennsylvania Petroleum Association, the Fuel Merchants Association of New Jersey, and the Independent Fuel Terminal Operators Association.

Together, the members of these groups market most of the home heating oil and residual fuel oil in the Northeast and we serve approximately 8 million homes and businesses.

I will briefly review the reasons for our opposition.

First and foremost, we believe that an import fee is a very bad energy policy, primarily because of the severe damage that it would cause independent marketers and also because of the incentive it would cause—to drain America first.

These effects would distort the domestic petroleum industry and injure long-term security. Second, we believe import fees are bad economic policy, and as Mr. McNally has just said, I don't think we need to dwell on that too long. I think he has articulated that very well.

They would slow the growth of national economy, and therefore, undermine economic, budget, and international trade objectives, and they would discriminate against our region and our customers.

Finally, we believe that import fees are bad tax policy because of the gross inefficiencies as a revenue-raising tool and because of their extreme regressiveness.

Another way of putting it, Mr. Chairman, is why should the members of the Northeast have the disproportionate pleasure of reducing the deficit while others, that use other kinds of fuel in the country do not, and as a result we obviously would seek exemptions from that kind of policy.

I am sure I am going to be followed by other speakers on the podium today that will make similar allegations about motor fuels.

First, as independent marketers, we depend on the availability of imported petroleum products for our customers. For the most part, we buy domestic products but without economically priced imports, we would be at the mercy of domestic refiners who have curtailed or eliminated their historic role as suppliers to the independent marketers.

Import fees on crude oil primarily hurt our customers. Import fees on petroleum products hurt both our industry and our customers. The independent marketers would be devastated if Congress imposes import fees on petroleum products that exceed import fees on crude oil. Such a differential fee structure would place independent marketers at a severe disadvantage to domestic refiners.

This is grossly unnecessary and will have serious adverse consequences on our industry and on our customers.

Independent marketers have provided most of the competition in the fuel oil and home heating oil market. That competition has benefited the consumer significantly. When prices are declining, competition from independent marketers guarantees that lower prices are passed on through to the customers quickly. When prices are rising, competition from independent marketers keep the refiners 'margins in check.

Large fees on imported products are sure to eliminate their competition from independent marketers. As a result, there would be little check on monopolistic or discriminatory pricing by domestic refiners, particularly in rural areas where there are very few suppliers during a period of tight supply and during periods of price volatility.

There is no reason for a national energy policy that tilts the entire market toward domestic refiners. Imports of petroleum products are a small fraction of the domestic consumption. Import penetration of gasoline and fuel oil is only 6 percent. Domestic refiners supply more than 14 million barrels per day, of a total of 15.6 million barrels a day. Imports provide healthy competition, rather than a threat of extinction of domestic refiners.

Moreover, lower crude oil prices offer major benefits to domestic refiners, particularly independents which have little or no production of their own. The decline in crude oil prices may shift the balance between refiners and marketers and between the majors and independents. However, we are convinced that these changes will benefit independent marketers and refiners, alike.

Before any precipitous action is taken to impose a minimum price for crude oil, Congress should evaluate the industry's experience with lower prices.

Second, independent marketers oppose oil import fees because they would seriously injure the national economy. We understand that a serious problem may affect certain independent producers in supporting industries and we are sympathetic to these problems. But they are not the basis for action that will significantly impede economic growth.

I will not repeat the points that have been made so far by so many eminent economists. I will only reiterate that the decline in GNP and the increase in unemployment, and the increase in interest rates that import fees would cause.

Economists project, as this committee has heard numerous times in the last few days, that a $10 import fee, such as proposed in either S. 1507 or S. 1997, at current prices, would take at least 1 percent off the GNP, increase unemployment by 500,000, and increase inflation by 1 or 2 percent. These numbers are not theoretical statistics; they are real effects on people and income.

For every job that may be lost in the oil-producing sectors, four or five new jobs will be created in other industries. For every dollar decline in crude oil prices, $5 to $7 billion will be made available for consumer expenditures from other goods and services.

Mr. Chairman, if I might, the figures that have been cited most recently as our current market prices exists, suggest that the country will soon be the recipient of about a $60 billion surplus of money that will not be exported overseas, that will be flowing into our economy. I think we are seeing the end of a 12-year cycle, where the pendulum has swung fully to the other side. Where the low is, I think none of us know, but it is undoubtedly approaching a low at this time, and there are many that say that that swing for the pendulum back will take equally as long to do, particularly with the strong competition from the North Sea and from Mexico and Canada, and the like.

Import fees would deny American consumers additional purchasing power, which is already being reflected in the stock and bond markets and interest rates on the street. It is too late to implement a fee that merely maintains prices at preexisting levels.

Prices have already declined significantly for home heating oil and continue to do so. A $10 fee will not go unnoticed. It will immediately increase gasoline and heating oil prices by about 24 cents per gallon, and having worked very hard, Mr. Chairman, in 1982 for the nickel tax increase for our Nation's highways, I think we had the advantage in those days of triggering it at exactly the time when prices started to drop so it did go unnoticed.

But I think the constituents of Congess will very much notice any changes that are now affected were well behind the curve and that those fees are going to be drastically noticed, not only at the pump, but in every facet of business. And I think they will hold those accountable that have taken that remedial action.

I do want to raise one extremely important economic point that seems to have been missed. A $10 import fee will not generate any significant net Federal revenue. This is a fact about which economists and the administration and Congress agree. Both the CEA and CBO project as much or more deficit reduction of 1 percent additional growth, and lower inflation than from a $10 import fee.

A draft DOE study, attachment No. 7 to my written testimony, concludes that a decline in oil prices from $20 to $10 a barrel would generate $13.9 billion in deficit reductions in 1986, and $24.4 billion in 1987.

Given these deficit reduction projections, oil import fees cannot be cloaked as a national deficit reduction policy. Oil import fees——

Senator Hecht. Excuse me. Let me interrupt you for a moment. I am told that there is a severe time restraint. So if I can ask you to capsulize, and the rest of you, kind of make your summaries shorter. OK.

Mr. Clements. Yes, sir; I certainly will. Perhaps, Mr. Chairman, I would just close with one major point, since it was raised this morning, and that is the one of energy security, and just make this statement for the record.

There is no energy security basis for securing domestic crude oil production today—or increasing domestic crude oil production today. The world is really awash in oil. As has been stated earlier, only 8 percent of the U. S. crude oil now is derived from OPEC. As Mr. McNally has just stated, most of it comes from Mexico, Canada, the United Kingdom, and Nigeria, and these countries that have made investments.

Accordingly, oil import fees will drain the U.S. reserves at a time when there is no security threat; we will be back to a 1959 situation, where we put on quotas and drained our domestic reserves, and they will be unavailable 10 or 20 years from now when the rest of the world oil market may be at threat.

We certainly would support what you and the members of this committee have supported in the past, and that would be an immediate fulfillment of the strategic petroleum reserve. We certainly would echo what other speakers have said this morning, that the price is right now, and we certainly would support the committee's action in undertaking that.

[The prepared statement of Mr. Clements follows:]

# STATEMENT
of

JOHN A. CLEMENTS
PRESIDENT
NEW ENGLAND FUEL INSTITUTE

before the
UNITED STATES SENATE
COMMITTEE ON ENERGY AND NATURAL RESOURCES

on
PROPOSALS TO TAX OIL IMPORTS

Appearing on Behalf of

EMPIRE STATE PETROLEUM ASSOCIATION
FUEL MERCHANTS ASSOCIATION OF NEW JERSEY
INDEPENDENT FUEL TERMINAL OPERATORS ASSOCIATION
NEW ENGLAND FUEL INSTITUTE
PENNSYLVANIA PETROLEUM ASSOCIATION

Washington, D.C.
March 20, 1986

## I. INTRODUCTION AND SUMMARY

My name is John A. Clements. I am President of the New England Fuel Institute ("NEFI").

NEFI is an association of 1,064 independent retail and wholesale home heating oil marketers who sell petroleum products throughout the six New England states. NEFI members own no refineries, pipelines or production facilities. They are primarily small, independent competitive local businessmen serving the energy needs of their communities. I am testifying on behalf of an ad hoc coalition of petroleum marketers opposed to oil import fees or other barriers to imports. In addition to NEFI, this coalition includes the Empire State Petroleum Association, the Pennsylvania Petroleum Association, the Fuel Merchants Association of New Jersey and the Independent Fuel Terminal Operators Association. Together, the members of these groups market most of the home heating oil and residual fuel in the Northeast. We serve approximately 8 million homes and businesses.

We are strongly opposed to import fees, either in the form of a flat fee of $5 or $10 per barrel, as proposed by Senator Boren in S. 1507, or as a floating fee that establishes a floor price for imported crude oil and an additional fee on products, as proposed by Senators Wallop and Bentsen in S. 1997.

As a matter of tax policy, import fees are regressive and inefficient, and therefore have no legitimate place in tax reform or deficit reduction. We have also considered the need

We have also considered the need for either of these proposals on grounds of economic or energy policy, in light of the recent decline in world crude oil prices. We have concluded they would seriously harm the national economy, and would discriminate against oil consuming sectors and regions of the country, particularly the Northeast.1/ In addition, import fees would hamper the U.S. competitive position in world trade.

Crude oil import fees would also create incentives to "drain America first", thus depleting the resources needed for a future emergency. Import fees on petroleum products would be even more costly, impairing the competitive viability of independent petroleum marketers, without any benefit to oil producers. Such long term adverse impacts far outweigh any short term benefits that protectionist legislation would confer on domestic producers or refiners.

Petroleum prices have been maintained by OPEC at levels significantly exceeding any cost basis since 1973. As petroleum prices fall to free market levels from these excessive prices, the independent producing sector and related industries may merit some special consideration to avoid undue

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1/ Included as Attachment 1 hereto is a letter from the members of the ad hoc Coalition Against Energy Taxes to President Reagan and the joint Congressional leadership, expressing opposition to new energy taxes or fees as part of tax reform or deficit reduction. The many industries represented in that Coalition illustrate the sectors that would be harmed most by oil import fees.

hardships and maintain production incentives. However, such special treatment must not be import protection which deprives all Americans a choice of competing fuels and suppliers, as well as the benefits of economic growth, higher employment, and lower inflation that falling oil prices have already begun to provide. Such special treatment must not place U.S. energy prices at levels substantially above our competition in world markets. It must not unfairly favor independent refiners over independent marketers. And such special treatment must not be based on illusory deficit reduction that takes as much revenue from the Treasury as it provides.

We, as marketers, are an integral part of the domestic petroleum industry; we need a strong and thriving domestic industry. We support use of the tax code to guarantee a strong domestic producing and refining sector, including preservation of the intangible drilling cost deduction. In addition, we support substantially increased oil purchasing for the Strategic Petroleum Reserve, both from domestic producers and from Mexico. However, we oppose legislation that would maintain domestic prices at OPEC-created levels, thereby conferring huge windfalls on oil and gas producers and refiners.

## II. OIL IMPORT FEES WOULD SERIOUSLY HARM THE ECONOMY

### A. Adverse Macroeconomic Effects

Oil import fees protect the domestic oil and gas industry at an enormous cost to the economy. Studies of the macroeconomic impact of fees or tariffs on imported crude oil uniformly conclude that the national economy would suffer substantial losses. There is no doubt that economic growth would be impeded; it is estimated that a $10 fee would cause a decline in GNP from 1.0 to 2.6 percent.2/ Equally certain, unemployment would increase by up to 600,000,3/ and inflation would increase by up to 2.6 percent.4/ The precise magnitude cannot, of course, be projected, but the conclusion is clear: an oil import fee will impose a substantial drag on the U.S. economy.

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2/ See Consumer Federation of America, "The Energy, Economic and Tax Effects of Oil Import Fees" (October 25, 1985), Table ES-1 at p. iv, included as Attachment 2 ("CFA Study"). For the purposes of macroeconomic analysis, it is irrelevant whether a $10 fee is imposed entirely on crude oil, or partly on crude oil and the remainder on petroleum products. The critical fact is that petroleum product prices would rise by about $10 per barrel, or $.24 per gallon.

3/ See Attachment 2.

4/ This inflation impact is measured by the change in the Consumer Price Index. See Attachment 2.

The magnitude of this drag is not lessened by the decline in the price of crude oil. The recent decline in oil prices does not reduce the burden to the economy from oil import fees; it simply alters its absolute and psychological effects. No matter what the price of crude oil, a $10 oil import fee will eliminate 1 to 2 percent of GNP growth, and add 1 to 2 percent to the rate of inflation.5/ Moreover, such a fee will create a price shock to all consumers, since product prices already have declined and are falling steadily. An imported fee will increase prices for oil products and competing fuels by about $.24 per gallon.

Just as oil import fees burden the economy, decreases in oil prices produce a substantial positive effect on growth. The recent decline in crude oil prices has led to a boom in both the stock and bond markets, interest rates are declining, and economic analysts are uniformly increasing their estimates of economic growth.6/ American consumers are already beginning to enjoy the benefits of lower oil prices in their home heating

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5/ Thus, if falling oil prices help to generate GNP growth of 4 percent, an oil import fee would reduce the growth rate to 2-3 percent. If GNP was only expected to grow by 1 percent without an oil import fee, the fee will likely cause a recession. In fact, each of the seven major oil price increases since World War II has been followed within nine months by a recession.

6/ *See*, *e.g.* *Washington Post*, February 16, 1986 at G5. *New York Times*, February 19, 1986 at A1, included as Attachment 3.

oil bills and at the gasoline pump. By increasing oil prices to last year's levels, an oil import fee would rob the economy of this powerful engine for growth, which may be the most positive economic force in more than 20 years.

B. Minimal Deficit Reducing Effects

Oil import fees would not only inhibit growth induced by falling oil prices, but would also counteract the deficit reducing effects of falling oil prices. As a result, estimates of the deficit reducing impact of oil import fees are highly exaggerated in a time of falling oil prices. Those who claim that a $5 oil import fee will generate $8 billion in revenue include only its direct revenue impact; they fail to consider the lost revenue to the Treasury from slower growth and the substantially greater government expenditures caused by higher oil prices.

In 1983 and 1984, studies were conducted by the Department of the Treasury, the Department of Commerce, and the Congressional Budget Office. Each concluded not only that the U.S. economy would benefit significantly from a decline in oil prices, but also that the federal deficit would be reduced substantially. The Treasury analysis concluded that a 40 percent decline in oil prices would reduce the annual deficit by $6 billion to $10 billion and a 24 percent decline would yield an annual saving of $4 billion to $5.5 billion.7/ CBO

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7/ Treasury Department interagency study of falling oil prices, Chapter II, p. 2 (1983) *See* Attachment 4.

stated that "a sizable and permanent decline in oil prices would have a very favorable effect on inflation and on economic growth in the United States, and would significantly reduce the projected baseline budget deficit. . . ."8/ CBC calculated that a permanent $8 per barrel reduction in oil prices would reduce the unified budget deficit by a cumulative total of $129 billion over five years.9/

More recently, the Chairman of the President's Council of Economic Advisors estimated that a $10 per barrel decline in the price of oil would yield an increase of as much as 1 percentage point to economic growth.10/ According to the President's Budget, eliminating this growth would increase the deficit by rising amounts each year, from $7.2 billion in 1987, to $78.2 billion by 1991.11/ The total increase in the deficit

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8/ CBO, "Economic and Budgetary Consequences of an Oil Price Decline -- A Preliminary Analysis" (March 1983) at p. 1.

9/ Id. at pp. 16-17. See Attachment 5. Significantly, declines in oil prices below $20 per barrel will generate substantially greater deficit reduction effects than declines above $20 per barrel, which were analyzed by CBO and Treasury. Declines above $20 produce a significant loss of windfall profit tax revenues to the federal Treasury, while declines below $20 produce almost no loss to the Treasury from windfall profit tax revenues. See Crude Oil Windfall Profit Tax Act of 1980, P.L. 96-223, I.R.C. Sec. 4989. Thus, the deficit reducing effects of a decline in oil prices from $25 to $15 per barrel would be substantially greater than the effects of a decline from $30 to $20 per barrel.

10/ Testimony of Beryl Sprinkel before the Joint Economic Committee, February 6, 1986 at p. 35.

11/ See Attachment 6.

would far exceed the total gross revenue that could be generated by a $10 fee over the entire five year period.

Similarly, the Department of Energy's Energy Information Administration, in an anlysis of changes in economic indicators resulting from falling oil prices, projected that a decline from $24 to $15 would generate $11.4 billion in deficit reduction in 1986, and $18.5 billion in 1987.12/

The precise effect of falling oil prices on the budget deficit from 1987 to 1991 may be difficult to project. But the direction and order of magnitude of these effects are clear: falling oil prices will generate significant increases in taxes, and will reduce federal outlays that are directly related to oil prices and that are tied to a cost of living escalator. Oil import fees will eliminate these benefits. In short, oil import fees will contribute little if anything to deficit reduction, and may actually increase the federal deficit.

### C. Inefficiency of Oil Import Fees as a Tax

#### 1. Windfall to Oil Producers

The fundamental reason why oil import fees contribute so little to deficit reduction is their inefficiency. Oil import fees tax only oil imports, which are only thirty percent of total U.S. oil consumption, and less than 12 percent of total U.S. energy consumption.13/ However, because oil imports

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12/ See Attachment 7.

13/ Petroleum accounts for about 38.6 percent of total U.S. energy consumption. See, e.g., DOE/EIA State Energy Data Report (May 1985) at pp. 14-20.

are the marginal source of oil in the U.S., the price of oil imports establishes the price for domestic production of crude oil and natural gas liquids. Therefore, consumer prices for all oil products increase by approximately the amount of the fee. However, the Treasury obtains revenue only from the portion that is imported, and from increased windfall profits taxes on domestic production.14/ Accordingly, the predominant portion of the increased consumer expenditures for oil flow to domestic producers, not the federal Treasury.

### 2. Windfall to Natural Gas Producers

The inefficiency of oil import fees is even more evident in the natural gas sector, where wellhead prices will rise and all of the increases in revenue will flow to producers. Many analysts ignore the direct effect of oil import fees on natural gas prices. However, the experience in natural gas markets during the past five years demonstrates, beyond question, that natural gas prices move in tandem with oil.15/

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14/ Windfall profit taxes do not apply to most production below $20 per barrel, and do not apply to any production currently below $18.35 per barrel.

15/ From 1978 to 1982, natural gas prices rose significantly, despite controls on "old gas," to meet the higher price of oil. Then, as soon as oil prices began to decline in 1982-83, gas prices followed, first in the industrial sector, then in the residential market. Today, gas prices are effectively decontrolled, and marginal gas production sells for about $2.00 per mcf, or about $12 per barrel equivalent. There is a substantial excess of production

[Footnote continued]

Thus, if oil import fees are enacted, increasing the price of residual fuel oil to industrial and utility consumers, and heating oil to residential and commercial consumers, gas prices will rise to meet these higher prices. In fact, much of the gas sold in the U.S. today is sold under contract escalators based on the oil equivalent price, and many utilities actually have tariffs that require that the price of gas to large users be set at the equivalent price of heating oil.

Consequently, oil import fees would provide a massive windfall to the natural gas sector. The CFA Study estimates that the windfall from a $10 oil import fee would be approximately $25 billion.16/ Significantly, none of this revenue would be taxed as windfall profit, because the Crude Oil Windfall Profit Tax does not apply to natural gas production.17/

Unbelievably, an oil import fee would also provide a windfall to Canadian natural gas producers, from which imports

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[Continued from previous page]

even at this level, and there is little doubt that gas prices will decline further if oil prices are not raised by import barriers.

16/ See CFA Study at p. iii.

17/ See Crude Oil Windfall Profit Tax Act of 1980, P.L. 96-223. Of course, to the extent that these increased revenues result in increased net taxable income, natural gas producers will pay additional corporate income taxes.

have been increasing significantly. Competition from Canadian natural gas imports has contributed to the decline in domestic natural gas prices to about $12 per barrel equivalent. Many contracts for Canadian gas imports specifically tie the import price to the price of competitive oil products. Thus, an oil import fee will permit Canadian natural gas producers to increase prices for exports, with absolutely no benefit to the U.S. economy or the U.S. Treasury.

Any tax limited to imports necessarily provides this windfall benefit to the industry protected, and thereby performs inefficiently as a revenue measure. This inefficiency can be corrected only by taxing all domestic oil and gas production and natural gas imports. Although this broad-based energy tax would not alter the adverse macroeconomic effects of the energy price increase, it would eliminate the inter-fuel discrimination of import fees and multiply about five-fold the revenues collected.[18]

### 3. Increases in Federal Outlays

Oil import fees, or energy taxes, are also inefficient because of their effect on federal outlays. Every analysis of oil import fees concludes that outlays will increase substantially. Primarily, outlays will increase for petroleum products and related purchases, particularly by the Department of Defense; for programs with benefits indexed to a cost of living adjustment; for interest payments; for unemployment insurance; and for low income energy assistance. The Treasury analysis concludes that a reduction in oil prices of $8 per barrel will yield a $10 billion annual decline in federal expenditures;19/ the CBO analysis projects savings of $110 billion over 5 years from a similar $8 decline in oil prices.20/ The combined effects of oil import fees on federal revenues and expenditures demonstrates its gross inefficiency as a revenue raising measure.

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[18] Oil imports represent approximately 12 percent of total energy consumption; total oil and gas consumption account for about 60 percent of national energy use. See, e.g., DOE/EIA, State Energy Data Report (May 1985).

## D. Trade Effects of Oil Import Fees

Some proponents have suggested that oil import fees would produce significant benefits to the U.S. balance of trade. To the contrary, an oil import fee would not significantly reduce the U.S. trade deficit. Instead, it would create serious trade problems for many U.S. industries. Petroleum imports accounted for approximately $48.3 billion of the U.S. trade deficit last year, and the amount has decreased continuously from $75.6 billion in 1981. During this period, the petroleum component of the U.S. import bill has declined from 28.9 percent to about 14 percent.21/ Clearly, the massive

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19/ *See* Attachment 4.

20/ *See* Attachment 5.

21/ *See* Attachment 8.

increase in the U.S. trade deficit has not been caused by oil imports. If no protectionist action is taken by the Congress, and the recent reduction in world crude oil prices is not immediately reversed, there will be further substantial reductions in the bill for petroleum imports in 1986, probably on the order of $15-$20 billion.

However, if oil import fees are enacted, the U.S. will impose on its domestic industries energy prices that are significantly higher than those paid by the rest of the industrial world. This differential will create a significant handicap to all energy intensive U.S. industries, such as chemicals, agriculture, steel, wood and paper products, mining and plastics. These industries will be subject to greater import penetration, and will have much greater difficulty competing in foreign markets.

The level of this handicap could be enormous. If oil prices stabilize at $15 per barrel, and a $5 fee is imposed on crude oil and a $10 fee on products, U.S. energy costs would be about 67 percent higher than world levels. If oil prices fall to $12 per barrel, and a floor price of $22 for imported crude is established, with an additional $3 per barrel fee on imported products, U.S. industrial energy costs would be more than 100 percent above world price levels. These examples illustrate the magnitude of the burden to domestic industries that would be created by the legislation being considered.

The damage to these industries would more than likely offset any modest reduction in the trade deficit resulting from decreased oil imports.22/ And these are the industries on which we must depend to restore a positive U.S. balance of trade.23/

## III. OIL IMPORT FEES ARE UNSOUND ENERGY POLICY

### A. The Cost of Production is Well Below $22

S. 1997 would establish $22 per barrel as the "survival price" for domestic crude oil, and guarantee that price for every barrel produced. However, there is no evidence that any significant amount of domestic crude oil production cannot be marketed profitably for considerably less than $22 per barrel. The best indication of the true cost of crude oil production will be the level at which market forces stabilize the price of crude oil. If oil prices decline to levels below the marginal cost of production, some production will be shut-in, thereby decreasing available supplies and tightening the market.

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22/ If an oil import fee reduced the level of oil imports by 10 percent, for example, the trade deficit would decline by about $3.5 billion.

23/ Indeed, the President announced on September 23, 1985 a Trade Policy Action Plan designed to expand free trade and open foreign markets to U.S. products. Oil import fees would seriously hamper these efforts.

Recently, spot prices fell below $15 per barrel before there was any indication that producers would refuse to sell. Although some marginal stripper well production may be shut-in at this price, these are not grounds for maintaining the price of all domestic crude at $15 per barrel, or significantly higher. In addition, spot natural gas prices declined to about $12 per barrel equivalent, even before the recent decrease in oil prices; yet there remains a substantial surplus of domestic gas production seeking markets at this price. Thus, no domestic oil or gas production requires a price of $22 per barrel to be sold profitably; and the small amount that may require a price of $15 per barrel should not generate a windfall for the producers of much less costly oil and gas.24/

An oil price of $22 per barrel only seems reasonable in relation to the inflated oil prices of the past six years. In fact, prior to the second oil price shock in 1978-79, caused largely by the revolution in Iran and the aggressive pricing behavior of the Ayatollah, world oil prices were less than $15 per barrel.25/ Even these price levels were engineered by the

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24/ In fact, the cost of domestic oil production has declined significantly during the past four years. See Oil & Gas Journal, "Index shows drilling, completion cost decline" (Nov. 4, 1985), included as Attachment 9.

25/ In 1978, the average cost of crude oil imports was $14.57 per barrel. See, e.g., Energy Information Administration, Monthly Energy Review.

OPEC cartel in 1973-74, when oil prices quadrupled from about $3 to $12 per barrel. Thus, a U.S. administered price for crude oil of $22 per barrel, or a product fee that raises oil prices to $25 per barrel, would legislate an oil price in the U.S. higher than that demanded by Saudi Arabia after the Arab Oil Embargo of 1973.26/ Few, if any, observers of OPEC's actions in the 1970's argued that these prices were cost-based.

## B. Oil Import Fees Will Result in Uneconomic Production of Oil

It is impossible to quantify the cost of production for domestic oil and gas, because the cost varies from field to field and well to well. For this reason, any import fee or price floor will provide windfalls to some producers and deny profitable production to others.

However, it is certain that establishment of any price floor for domestic crude, or imposition of an import fee, will lead to production of domestic crude oil and gas that is not economic in the current environment. In effect, it would create incentives to drain America first. In the short run, this may decrease oil imports; but in the long run, this premature production will injure U.S. national security.

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26/ Even worse, these inflated oil prices would apply only to U.S. consumers.

There is no energy security basis for increasing domestic crude oil production today. The world is awash in oil. U.S. import sources are secure and diverse. Only 8 percent of U.S. crude oil imports now derive from Arab OPEC. The principal suppliers to the U.S. are Mexico, Canada, the United Kingdom, Venezuela, Nigeria and Indonesia.27/ These are the countries that have made the investments and commitments that have created the surplus in world crude markets and have helped to reduce our dependence on Arab OPEC; yet these are the countries that would be injured most by a U.S. oil import fee.

Accordingly, oil import fees will drain U.S. reserves at a time when there is no security threat; these reserves will be unavailable ten or twenty years from now when the world oil market may present a threat, and these reserves, if available, could then be used to prevent or temper supply shortages. Thus, overproduction today could lead to energy security problems in the future.

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27/ See Attachment 10; and CFA Study, Table ES-3, included in Attachment 2.

## C. There is No Basis for a Higher Import Fee on Petroleum Products

### 1. Effect of Fees on Petroleum Products

If Congress determined that import fees on crude oil are necessary, despite their gross inefficiency and adverse effects, an equivalent fee must be placed on all imported products. Without an equivalent fee, there is an incentive to import products that are less expensive than products refined domestically. However, there is no legitimate basis for fees on imported products significantly higher than fees on imported crude. Such a differential would seriously injure competition in the petroleum market by imposing tremendous barriers to product imports.

If higher fees are placed on imported products, the effect on consumers would be the same as higher fees on all petroleum imports, since the price of all domestically refined products would rise to the price of the marginal import. Thus, a fee of $5 per barrel on imported crude oil, and $10 per barrel on imported petroleum products, would create the same macroeconomic burdens as a fee of $10 per barrel on imported crude oil. However, even less revenue would be raised than from a fee of $10 on crude oil. In addition, a differential fee on crude oil and products would split the windfall to the domestic industry between producers and refiners, thereby diminishing the revenues that could be used by producers for exploration and development.

An import fee differential of $5 per barrel would provide the domestic refining industry with a revenue increase of about $70 million per day, amounting to about $25 billion per year. A comparable windfall would be bestowed on the natural gas industry, which competes with petroleum products, not crude oil. An import fee differential of $3 per barrel for petroleum products, such as that included in S.1997, would generate approximately $15 billion in additional revenues for refiners.

## 2. Refiners Do Not Need Protection from Imports

Domestic refiners have not demonstrated the need for protection from imports, particularly on such a massive scale. In fact, imports of petroleum products in 1985 were considerably lower than the levels of product imports during almost every year of the 1970's, and were below the levels of 1984.[28] Other than residual fuel oil, the highest national import penetration for any petroleum product in 1985 was 6.7 percent for distillate. This is hardly cause for alarm compared to the import penetration problems faced by other U.S. industries.

Moreover, independent refiners stand to benefit significantly from the decline in crude oil prices. If no import fees are placed on crude oil, the decline in crude oil prices will permit higher margins for refiners. Thus, before import fees are even considered for petroleum products, the current experience of refiners with lower crude oil costs should be fully evaluated.

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[28] Attachment 11 provides a summary of U.S. petroleum product imports since 1970.

### 3. Adverse Effects on Marketers

Fees on petroleum products that are in excess of fees on crude oil would be particularly damaging to independent marketers, who depend on the availability of economically priced imports as a source of competitive supply. The availability of refined product imports is needed to induce competitive behavior by domestic refiners, particularly when domestic supplies are tight. If product imports are inhibited by fees, there will be little check on monopolistic and discriminatory pricing by refiners. Many independent marketers will be unable to compete, and the competitive force provided for so long by independent marketers will be eliminated. Without this competition, product prices will increase more quickly when crude oil costs increase, and will decline more slowly when crude oil costs decline. Refiners who advocate additional fees on products have not provided any basis for such massive federal intrusion into a competitive petroleum marketplace.

## IV. REBATES TO HEATING OIL CONSUMERS WILL NOT WORK

Each of the bills proposing import fees purport to provide an exemption, or a rebate, for fuel oil used in home heating. We. as heating oil marketers, know that these schemes will not effectively eliminate the burden that oil import fees would place on the nation's 14 million home heating oil consumers. Moreover, any such program is destined to result in a complex scheme of exemptions and entitlements that creates more problems than it solves. The complex, regulatory bureaucracy required to administer the oil price control program under the Emergency Petroleum Allocation Act of 1973 29/ should serve as a lesson to those who think any program of price supports can be implemented simply.

It is illusory to exempt imported home heating oil from import fees and expect that heating oil prices will not rise. On an annual basis, less than 200,000 barrels per day of heating oil is imported, yet winter distillate consumption averages well over 3 million barrels per day. Most of the home heating oil used on the East Coast is domestically refined and therefore will reflect the increased cost of domestic crude oil.

Moreover, if heating oil is exempt from import fees, much greater amounts would be imported, because the cost of

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29/ 15 U.S.C. Section 751 et seq.

domestically refined product would have to reflect the higher price of crude oil in the U.S. Domestic refiners would, to the extent possible, curtail production of distillate. However, it is highly unlikely that imports could supply nearly all of the demand for heating oil, because the increased demand from offshore refineries would increase the price of the imports. Ultimately, heating oil imports would increase, domestic refiners would suffer and heating oil prices would increase to reflect partially the fee on domestic crude oil.

It is also impossible to require refiners to pass through the fee on products other than home heating oil. This form of cost allocation was tried, and failed, in the 1970's under the Emergency Petroleum Allocation Act. Even if it were possible, it would require a comprehensive scheme of refiner pricing regulation.

In addition, it is impractical to provide tax refunds to home heating oil consumers. Refunds through the income tax system would fail to cover many of the poor and elderly who do not file returns, and could miss millions of renters completely. Moreover, there will be reluctance politically to provide refunds to oil heat consumers but not to consumers of other fuels for home heat and other essential users. It is clear from the experience of the past five years that low income energy assistance programs will not be adequately funded, despite the best of intentions, and that funds often will not reach consumers in time to pay for necessary expenditures.

Finally, even if it were possible to hold heating oil consumers harmless, there will be other sectors and industries that claim, and may merit, special protection. For example, to avoid discrimination against the Northeast, industrial and utility consumers of residual fuel should be exempt, as should manufacturers of petrochemicals for export. Any system of exemptions or rebates will require a regulatory bureaucracy, much like the one that was dismantled in 1981. This is a high price to pay for eliminating gross inequities, yet it will be necessary if import fees are imposed.

## V. CONCLUSION

From 1973 to 1981, the U.S. sought to control the maximum price of crude oil and petroleum products. The experience was a dismal failure, acknowledged by most of its proponents. It did not insulate the U.S. from higher world oil prices, but it did create enormous distortions and inequities among producers and consumers, some of which were rectified by complex regulatory and entitlement programs. This experience will be repeated if the U.S. seeks to control the minimum price for crude oil and petroleum products through import fees.

Even if questions of equity and administration could be resolved without complex regulation, which is unlikely, the system would not work. Oil has become a commodity, and to control the price of any commodity, one must control production.

For more than 40 years, the production of crude oil in the world was controlled, first by the Texas Railroad Commission, then by the major oil companies, the so-called Seven Sisters, then by OPEC, and most recently by Saudi Arabia alone. However, Saudi Arabia is now unable to control world production. Spot sales of crude oil represented only 10 percent of transactions in 1973; now spot sales account for about 50 percent of all crude oil traded. A futures market for crude oil and petroleum products has emerged, bringing thousands of buyers and sellers to the bargaining table, virtually forcing the price to respond to market forces.

Without the ability to control production, and hence the world price, there is no basis on which to predict the burdens that an import fee or a floor price would impose on the U.S. economy. At the levels proposed, U.S. energy costs could be twice that paid by the rest of the world. The harm to the U.S. competitive position in world trade could be enormous.

Equally important, there is no sound reason for denying to the American economy and its consumers the benefits of lower oil prices that will be enjoyed by the rest of the industrial world. These benefits will not only spur investment, employment and growth, they will also lead to substantial reductions in the federal deficit.

As with any commodity, oil prices will be cyclical and unpredictable, and hence investment is risky. Special tax treatment for oil and gas production should be continued, in recognition of this risk and as an incentive to explore and produce. In addition, energy security should be enhanced by continuing to build the Strategic Petroleum Reserve, which provides our best defense against any possible interruption in imports in the future. However, a program of protectionism that could cost the American economy $50-$70 billion per year in increased energy costs, eliminate much of the competition from independent marketers, stifle the boom that has begun, and contribute only minimally to deficit reduction, is not sound energy or tax policy. It should be rejected.

Thank you.

ATTACHMENT 1
Page 1 of 2

February 21, 1986

President Ronald Reagan
The White House
Washington, DC 20500

VIA MESSENGER

Dear President Reagan:

The undersigned associations and organizations--representing a broad range of consumer, labor, agriculture, transportation, environmental, manufacturing, utility, and small business interests throughout the nation-- are unanimous in their long standing opposition to additional energy taxes, including fees, as a means to raise revenues. We believe that such taxes are inflationary and inequitable.

The economic benefits to the nation of lower energy prices include lower inflation, higher economic growth, lower interest rates, strengthened foreign trade and increased opportunity for individual enterprise. These benefits should not be undercut by a new tax. We hope that you will continue to oppose any new energy taxes.

Sincerely,

Air Transport Association
American Boiler Manufacturers Association
American Trucking Associations
Chemical Manufacturers Association
Citizen/Labor Energy Coalition
Consumer Energy Council of America
Consumer Federation of America
Council of Industrial Boiler Owners
Edison Electric Institute
Empire State Petroleum Association
Independent Fuel Terminal Operators Association
Independent Gasoline Marketers Council
Independent Petroleum Association of America
National Coal Association
National Consumers League
National Council of Senior Citizens
National Farmers Union
National Grange
New England Council
New England Fuel Institute
Northeast Coalition for Energy Equity
Owner Operator Independent Drivers Association of America

ATTACHMENT 1
Page 2 of 2

Pennsylvania Petroleum Association
Petrochemical Energy Group
Petroleum Marketers Association of America
Portland Cement Association
Society of Independent Gasoline Marketers of America
The Society of the Plastics Industry, Inc.
Travel Tourism and Government Affairs Policy Council
    American Automobile Association
    American Bus Association
    American Car Rental Association
    American Hotel and Motel Association
    American Recreation Coalition
    American Sightseeing International
    American Ski Federation
    Association of Retail Travel Agents
    Conference of National Park Concessioners
    Gray Line Sight-Seeing Association
    Highway Users Federation
    Hotel Sales Management Association International
    International Association of Amusement Parks & Attractions
    International Association of Convention & Visitor Bureaus
    National Air Carrier Association
    National Campground Owners Association
    National Caves Association
    National Council of Area and Regional Travel Organizations
    National Council of State Travel Directors
    National Council of Travel Associations
    National Restaurant Association
    National Ski Areas Association
    National Tour Association
    Recreation Vehicle Industry Association
    Travel Industry Association of America
    United States Travel Data Center
    United States Tour Operators Association
United States Chamber of Commerce
Union Carbide

cc: The Honorable Thomas P. O'Neill, Jr.
    The Honorable Robert Dole
    The Honorable Bob Packwood
    The Honorable Pete V. Domenici

ATTACHMENT
Page 1 of 3

**Consumer Federation of America**

## THE ENERGY, ECONOMIC AND TAX EFFECTS OF OIL IMPORT FEES

OCTOBER 1985

### TABLE ES-1

### ESTIMATED ECONOMIC IMPACTS OF IMPORT FEES

(In Percent)

| SOURCE OF ESTIMATE | SIZE OF FEE | GNP CHANGE | CPI CHANGE | UNEMPLOYMENT CHANGE |
|---|---|---|---|---|
| Whartona/ | $5 | -1.3 | +1.3 | na |
| CBOb/ | $5 | - .5 | + .5 | +.2 |
| DOE/DRIc/ | $5 | - .5 | + .5 | +.3 |
| CRSd/ | $5 | - .9 | + .5 | +.3 |
| Historical Record | $10 | -1.7 | + .7 | +.5 |
| DRIe/ | $10 | -1.4 | + .7 | +.5 |
| CBOb/ | $10 | -1.2 | + .9 | +.4 |

SOURCES:

a/ Wharton Econometric Associates, *Long Range Forecast* Business Week, April 5, 1982.

b/ Congressional Budget Office, *Oil Import Tariffs: Alternative Scenarios and Their Effects* (Washington, D.C.; April, 1982).

c/ U.S. Department of Energy, *Economic Impact of an Oil Import Fee* (Washington, D.C.; March 19, 1982).

d/ Congressional Research Service, *Revenue and Macroeconomic Impacts of an Oil Import Tax: A Brief Review*. (Washington, D.C.; April 6, 1982).

e/ Press accounts.

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## TABLE ES-2

## ESTIMATES OF REVENUE LOSSES AND NET REVENUES FROM AN IMPORT FEE

| | PERCENT OF TOTAL INCREASE IN THE OIL AND GAS BILL | | | $10 FEE (Billions) |
|---|---|---|---|---|
| | CONSUMER ENERGY COUNCIL[a]/ | CONGRESSIONAL BUDGET OFFICE[b]/ | DEPARTMENT OF ENERGY[c]/ | |
| TOTAL BILL | 100% | 100% | 100% | $72 |
| GROSS REVENUE | 54 | 54 | 54 | 39 |
| REVENUE OFFSETS | 22-30 | 13 | 36 | 10-27 |
| NET REVENUE | 21-31 | 40 | 17 | 12-29 |

SOURCES:

a/ Consumer Energy Council of America, *A Comprehensive Analysis of the Impact of A Crude Oil Import Fee: Dismantling a Trojan Horse* (Washington, D.C., April, 1982).

b/ Congressional Budget Office, *Oil Import Tariffs: Alternative Scenarios and Their Effects* (Washington, D.C.; April, 1982).

c/ U.S. Department of Energy, *Economic Impact of an Oil Import Fee* (Washington, D.C.; March 19, 1982).

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## TABLE ES-3

## SOURCES OF IMPORTS INTO THE UNITED STATES SINCE THE OIL EMBARGO

(Thousand Barrels Per Day)

| YEAR | CONSUMPTION | TOTAL IMPORTS | OPEC | ARAB OPEC | CANADA | MEXICO | UNITED KINGDOM | OTHER NON OPEC |
|---|---|---|---|---|---|---|---|---|
| 1973 | 17308 | 6256 | 2993 | 915 | 1325 | 16 | 15 | 465 |
| 1974 | 16653 | 6112 | 3280 | 752 | 1070 | 8 | 0 | 340 |
| 1975 | 16322 | 6056 | 3601 | 1383 | 846 | 71 | 14 | 300 |
| 1976 | 17461 | 7313 | 5066 | 2424 | 599 | 87 | 31 | 353 |
| 1977 | 18431 | 8807 | 6139 | 3185 | 517 | 179 | 126 | 590 |
| 1978 | 18847 | 8363 | 5751 | 2963 | 467 | 318 | 180 | 484 |
| 1979 | 18513 | 8456 | 5637 | 3056 | 538 | 439 | 202 | 548 |
| 1980 | 17506 | 6909 | 4350 | 2551 | 455 | 533 | 176 | 491 |
| 1981 | 16508 | 5996 | 3323 | 1848 | 447 | 522 | 375 | 534 |
| 1982 | 15296 | 5133 | 2146 | 854 | 482 | 685 | 456 | 627 |
| 1983 | 15231 | 5051 | 1862 | 632 | 547 | 826 | 382 | 701 |
| 1984 | 15726 | 5437 | 2049 | 819 | 630 | 748 | 402 | 902 |
| 1985 | 15577 | 4817 | 1612 | 434 | 772 | 829 | 293 | 835 |

NOTE: The 1985 imports are the average of the first five months annualized.

SOURCE:

U.S. Department of Energy, Monthly Energy Review (Washington, D.C.; August, 1985) pp. 42-43.

The New York Times

TUESDAY, FEBRUARY 18, 1986

## Economic Forecasts Brighter As Result of Oil Price Slump

By PETER T. KILBORN

[illegible]

[illegible]

## Oil Price Drop Lifts Economic Outlook

[illegible]

[illegible]

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The Washington Post

# BUSINESS

## Falling Oil Prices, Cheaper Dollar Upset Economic Forecasts

*Revisions, Which Edge Closer to Administration's Estimates, Call for More Growth, Lower Inflation During 1986*

DEPARTMENT OF THE TREASURY
CHAPTER II: ECONOMIC
IMPACT ON THE UNITED STATES

ATTACHMENT 1

## Addendum

## Economic Impact of a $25 Per Barrel Price of Oil

The preceding analysis is based on a $13 drop in the world market price of oil to $20 per barrel. If the price of oil drops only $8 to $25 a barrel, the economic impact obviously would be smaller than that estimated for an oil price of $20 per barrel. Using an analytic framework that parallels the preceding one, a price reduction of $8 per barrel would yield a transfer of about $15.6 billion from foreign oil producers to U.S. users of oil. Part of this $15.6 billion would be spent on additional oil imports, i.e., about 1 million barrels per day or $10.4 billion, leaving $5.2 billion available for the purchase of domestic goods and services. This $5.2 billion would be an increment of about .15 percent to nominal GNP unless offset by reduced purchases from the United States by oil producing nations.

In addition to the transfer of income from foreign producers, an $8 reduction in the price of oil would transfer $30 billion of income from domestic producers of crude oil to domestic users. In total, the approximately $35.2 billion that would be available to the nonoil sectors of the economy would represent slightly less than 1 percent of GNP at the level two years from now.

The direct effect of the drop in oil prices on the overall level of prices for domestically purchased goods and services would be to lower it by about 1 percentage point or slightly more than the increase in real domestic output. To this would be added perhaps another 0.6 to 0.7 percentage points for the effects of lower oil prices on the costs of producing other goods and services. Finally, secondary effects through escalator clauses, etc., might tend to widen this further, but these effects would tend to be undone as real nonoil production expanded toward capacity.

If the price of oil drops $8 a barrel, leading to a real GNP increase of about 1 percent, there could be a modest reduction in the unemployment rate of perhaps 0.4 to 0.5 percentage points. This would translate into higher employment by about 400,000 to 500,000 persons.

The effect of an $8 or 24 percent decline in oil prices would reduce the budget deficit by approximately $4 billion to $5.5 billion. This deficit reduction would be the net effect of a reduction in tax receipts of $4.7 billion to $6 billion and a reduction in outlays of about $10 billion.

ATTACHMENT 5
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ECONOMIC AND BUDGETARY CONSEQUENCES
OF AN OIL PRICE DECLINE -- A
PRELIMINARY ANALYSIS -- MARCH 1983

CONGRESSIONAL BUDGET OFFICE

## Effects on the Federal Deficit

Permanently lower oil prices would have significant effects for projected federal budget deficits over the next five years. While the net reduction from the CBO baseline deficit projections would be quite small in 1984, it would increase to as much as $31 billion by 1988 under the $6 per barrel lower price scenario.

The net effect of lower oil prices for federal revenues would be relatively small throughout the five-year projection period (1984-1988). Gross windfall profit tax collections would be lower as shown in Table 5. Substantial reductions in domestic crude oil prices would mean that some domestically produced oil would no longer give rise to any windfall profit tax liability. Lower inflation would also reduce federal revenues, but this would be more than offset by revenue gains derived from greater real growth in the economy. As a result, the net effect of the economic changes portrayed in Table 4 on federal revenues would be modest. Relative to CBO's baseline projections, federal revenues would be $10 to $13 billion higher in 1988 under the lower oil price scenarios.

The net effect of lower oil prices for federal outlays would be greater than for revenues because all of the economic changes would work in the same direction. Projected cost-of-living adjustments for Social Security and other indexed benefits would be smaller as a result of lower inflation. Lower interest rates would reduce net interest costs. Lower inflation and unemployment would also reduce projections for other benefit programs such as food stamps, assistance payments, Medicare, and Medicaid. In addition, projections for federal employee pay raises and for nondefense discretionary spending would be somewhat lower. Finally, lower oil prices would reduce the cost of oil purchases by the Defense Department and for the Strategic Petroleum Reserve (an off-budget spending program). As shown in Table 5, the net outlay reductions of a $6 per barrel lower oil price would grow from $6 billion in 1984 to $21 billion in 1988.

It should be emphasized that the favorable effects of the petroleum price reduction on the federal deficit result from the assumed stimulation of real economic growth. If real growth does not accelerate in response to the oil price decline (for example, if it is neutralized by changes in monetary policy), then the budget effects would be much less favorable.

TABLE 5. BUDGET DEFICIT EFFECTS OF ALTERNATIVE LOWER OIL PRICE PATHS
(Changes from baseline projections, by fiscal year, in billions of dollars)

| | 1984 | 1985 | 1986 | 1987 | 1988 | Cumulative Five-Year Total |
|---|---|---|---|---|---|---|
| **Oil Prices $4 Lower:** | | | | | | |
| Windfall profit tax (gross) | 1 | 1 | 1 | 1 | 1 | 5 |
| Other revenues | -4 | -6 | -7 | -11 | -14 | -44 |
| Indexed benefits and unemployment insurance | * | -2 | -2 | -3 | -3 | -10 |
| Interest costs | -1 | -2 | -2 | -3 | -5 | -13 |
| Other outlays | -1 | -1 | -1 | -1 | -1 | -5 |
| Total Deficit Effects | -6 | -10 | -12 | -17 | -22 | -66 |
| **Oil Prices $6 Lower:** | | | | | | |
| Windfall profit tax (gross) | 3 | 3 | 3 | 3 | 3 | 15 |
| Other revenues | -3 | -5 | -5 | -10 | -13 | -36 |
| Indexed benefits and unemployment insurance | -2 | -4 | -5 | -6 | -7 | -25 |
| Interest costs | -4 | -5 | -7 | -7 | -9 | -32 |
| Other outlays | -1 | -3 | -4 | -4 | -5 | -17 |
| Total Deficit Effects | -6 | -14 | -17 | -23 | -31 | -94 |
| **Oil Prices $8 Lower:** | | | | | | |
| Windfall profit tax (gross) | 6 | 5 | 5 | 4 | 4 | 24 |
| Other revenues | -4 | -5 | -6 | -12 | -17 | -44 |
| Indexed benefits and unemployment insurance | -2 | -6 | -8 | -10 | -10 | -38 |
| Interest costs | -5 | -7 | -9 | -11 | -13 | -45 |
| Other outlays | -2 | -4 | -6 | -7 | -8 | -27 |
| Total Deficit Effects | -7 | -17 | -24 | -36 | -45 | -130 |
| **CBO Baseline Deficit** | 201 | 211 | 227 | 247 | 268 | 1,152 |
| Oil Prices $4 Lower | 195 | 201 | 215 | 229 | 246 | 1,086 |
| Oil Prices $6 Lower | 196 | 197 | 209 | 222 | 236 | 1,059 |
| Oil Prices $8 Lower | 194 | 194 | 203 | 211 | 222 | 1,023 |

* Less than $500 million.

BUDGET OF THE UNITED STATES
FISCAL YEAR 1987

ATTACHMENT 6

SENSITIVITY OF THE BUDGET TO ECONOMIC ASSUMPTIONS

(Fiscal years; in billions of dollars)

| Budget effect | 1987 | 1988 | 1989 | 1990 | 1991 |
|---|---|---|---|---|---|
| INFLATION | | | | | |
| Sustained one percentage point higher rate of inflation beginning October 1986 | | | | | |
| Outlays, entitlements: | | | | | |
| Indexed programs | 0.4 | 2.6 | 5.8 | 9.5 | 13 |
| Non-indexed programs | 0.3 | 0.9 | 1.6 | 2.4 | 3 |
| Outlays, discretionary programs: | | | | | |
| Defense | 1.4 | 3.6 | 6.3 | 9.3 | 12.3 |
| Nondefense | 0.5 | 1.5 | 2.9 | 4.4 | 5.9 |
| Receipts | 6.5 | 17.6 | 29.3 | 42.5 | 57.6 |
| REAL GROWTH | | | | | |
| Sustained one percentage point lower real GNP growth beginning October 1986 | | | | | |
| Receipts | −6.2 | −17.7 | −30.5 | −44.7 | −60.6 |
| INTEREST RATES (EFFECT ON NET INTEREST) | | | | | |
| Sustained one percentage point increase in interest rates under budget policy deficits beginning October 1986 | 5.1 | 10.3 | 13.0 | 14.1 | 15.3 |
| INTEREST COST OF HIGHER FEDERAL BORROWING | | | | | |
| Effect of $10B lower borrowing in 1987 [2] | 4.8 | 8.4 | 7.9 | 7.0 | 6.6 |
| UNEMPLOYMENT RATE | | | | | |
| One percentage point higher rate beginning October 1986 | | | | | |
| Unemployment benefits | 4.7 | 2.8 | 2.4 | 2.6 | 2.7 |
| Other unemployment sensitive outlays | 1.8 | 2.0 | 2.0 | 2.0 | 2.0 |
| FEDERAL PAY RAISES | | | | | |
| Outlay effect of one percentage point increase | | | | | |
| Military personnel, October 1986 | 0.5 | 0.5 | [illegible] | 0.5 | 0.6 |
| Civilian employees, January 1987 | 0.4 | 0.6 | [illegible] | 0.7 | 0.7 |
| Employer share, employee retirement | −0.1 | −0.1 | [illegible] | −0.1 | −0.1 |
| COMBINED EFFECTS | | | | | |
| Effect of a one percentage point higher annual rate of inflation[1] and interest rates, beginning October 1986, current services basis: | | | | | |
| Change in receipts | 6.5 | 17.5 | 29.3 | 42.5 | 57.5 |
| Change in outlays | 7.9 | 20.2 | 32.7 | 44.7 | 64.5 |
| Increase in deficit (−) | −1.4 | −2.7 | −3.5 | −2.2 | −6.8 |
| Effect of a one percentage point lower annual rate of real growth, with higher unemployment, beginning October 1986: | | | | | |
| Change in receipts | −6.2 | −17.7 | −30.5 | −44.7 | −60.5 |
| Change in outlays | 1.0 | 4.3 | 8.5 | 12.6 | 17.6 |
| Increase in deficit (−) | −7.2 | −22.0 | −39.0 | −57.3 | −78.2 |

[1] [illegible]
[2] [illegible]

Higher inflation is likely to affect other economic factors that influence the deficit, such as interest rates and Federal pay. The direct and indirect effects of a one percentage point higher rate of inflation beginning October 1986 are shown in the lower part of the accompanying table. Note that the effects of the higher inflation rate

Attachment 7
Page 1 of 2

**DRAFT**
**February 12, 1986**
**1:00 P.M.**

**Table 1. Change in Key Macroeconomic Indicators for Three World Oil Price Scenarios from STEO Base Case**

| Indicator (change from STEO) | 1986 | | | 1987 | | |
|---|---|---|---|---|---|---|
| | $10 | $15 | $20 | $10 | $15 | $20 |
| **Real Gross National Product (% diff.)** | **1.8** | **1.1** | **0.5** | **2.9** | **1.7** | **0.7** |
| **Implicit GNP Deflator (% diff.)** | **-1.9** | **-1.2** | **-0.6** | **-3.3** | **-2.2** | **-1.0** |
| **Unemployment Rate (difference)** | **-0.7** | **-0.4** | **-0.2** | **-0.9** | **-0.5** | **-0.2** |
| **Federal Deficit ($billion diff.)** | **-19.0** | **-11.4** | **-5.1** | **-32.0** | **-18.5** | **-7.6** |

**(Official Administration estimates of the impact on Federal deficits will be made by the Treasury Department, and may differ somewhat.)**

Attachment 7
Page 2 of 2

**DRAFT**
**February 12, 1986**
**1:00 P.M.**

**Table 2. Comparison of Refined Product Consumprion and Key Economic Assumptions for Three World Oil Price Scenarios with STEO Base Case**

| | 1986 | | | | 1987 | | | |
|---|---|---|---|---|---|---|---|---|
| **Product (million B/D)** | **STEO Base** | $10 | $15 | $20 | **STEO Base** | $10 | $15 | $20 |
| **Motor Gasoline** | 6.88 | 7.18 | 7.10 | 7.02 | 7.04 | 7.30 | 7.26 | 7.22 |
| **Distillate Fuel Oil** | 2.85 | 3.16 | 3.05 | 2.93 | 2.92 | 3.33 | 3.16 | 3.01 |
| **Residual Fuel Oil** | | | | | | | | |
| **Nonutility** | 0.80 | 0.94 | 0.88 | 0.82 | 0.80 | 0.97 | 0.92 | 0.84 |
| **Utility** | 0.36 | 0.42 | 0.40 | 0.38 | 0.36 | 0.42 | 0.40 | 0.38 |
| **Other** | 4.91 | 5.08 | 4.99 | 4.92 | 5.01 | 5.31 | 5.11 | - 5.02 |
| **Total** | 15.80 | 16.78 | 16.42 | 16.07 | 16.13 | 17.33 | 16.85 | 16.47 |
| **Assumption (unit)** | | | | | | | | |
| **World Oil Price (current $barrel)** | 24.80 | 12.00 | 16.40 | 20.80 | 24.00 | 10.00 | 15.00 | 20.00 |
| **Real Disposable Pers. Income ($billion 72)** | 1210 | 1224 | 1219 | 1214 | 1244 | 1274 | 1261 | 1251 |
| **Industrial Production (1977 = 1.00)** | 1.292 | 1.346 | 1.326 | 1.309 | 1.346 | 1.433 | 1.399 | 1.371 |
| **Product Prices ($/gallon)** | | | | | | | | |
| **Motor Gasoline** | 1.14 | 0.80 | 0.94 | 1.06 | 1.10 | 0.75 | 0.90 | 0.99 |
| **Distillate Fuel Oil** | 0.99 | 0.59 | 0.73 | 0.87 | 0.97 | 0.55 | 0.70 | 0.83 |

Attachment 8

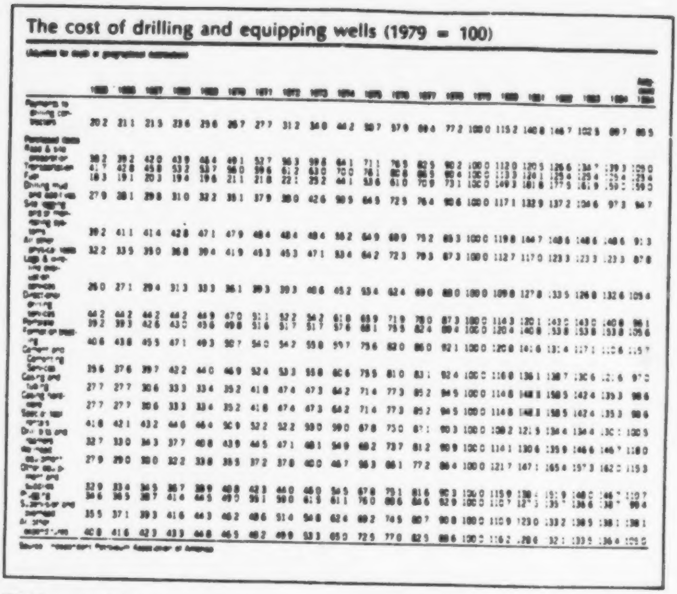
## PETROLEUM IMPORTS AS A PERCENTAGE OF U.S. BALANCE OF TRADE DEFICIT (1981-1985)

| | TOTAL U.S. EXPORTS (EX DOD) | TOTAL U.S. IMPORTS | TOTAL PETROLEUM IMPORTS | PERCENTAGE OF PETROLEUM |
|---|---|---|---|---|
| 81 | 233.7 | 261.3 | 75.6 | 28.9 |
| 82 | 212.2 | 244.0 | 59.4 | 24.3 |
| 83 | 200.5 | 258.0 | 52.3 | 20.3 |
| 84 | 217.9 | 325.7 | 55.9 | 17.2 |
| 85 (Jan-Oct) | 178.4 | 284.5 | 40.3 | 14.1 |
| 85 (Annualized)* | 214.1 | 341.4 | 48.4 | 14.1 |

* Estimate

SOURCE: U.S. Department of Commerce

Attachment 9



## The cost of drilling and equipping wells (1979 = 100)

(Adjusted to depth & geographical distribution)

| | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | August 1985 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Payments to drilling contractors | 20.2 | 21.1 | 21.5 | 23.6 | 25.6 | 26.7 | 27.7 | 31.2 | 34.0 | 44.2 | 50.7 | 57.9 | 69.4 | 77.2 | 100.0 | 115.2 | 140.8 | 146.7 | 102.5 | 89.7 | 80.5 |
| Purchased items | | | | | | | | | | | | | | | | | | | | | |
| Roads & site preparation | 38.2 | 39.2 | 42.0 | 43.9 | 46.4 | 49.1 | 52.7 | 56.3 | 59.6 | 66.1 | 71.1 | 76.9 | 82.5 | 90.2 | 100.0 | 112.0 | 120.5 | 126.6 | 134.7 | 139.3 | 129.0 |
| Transportation | 41.7 | 42.8 | 45.8 | 53.2 | 53.7 | 56.0 | 59.6 | 61.2 | 63.0 | 70.0 | 76.1 | 80.8 | 86.5 | 90.4 | 100.0 | 113.3 | 120.1 | 125.4 | 125.4 | 125.4 | 123.6 |
| Fuel | 18.3 | 19.1 | 20.3 | 19.4 | 19.6 | 21.1 | 21.8 | 22.1 | 25.2 | 44.1 | 53.6 | 61.0 | 70.9 | 73.1 | 100.0 | 149.3 | 181.6 | 177.5 | 161.9 | 159.0 | 159.0 |
| Drilling mud and additives | 27.9 | 28.1 | 29.8 | 31.0 | 32.2 | 35.1 | 37.9 | 38.0 | 42.6 | 59.5 | 64.5 | 72.5 | 76.4 | 90.6 | 100.0 | 117.1 | 132.9 | 137.2 | 104.6 | 97.3 | 94.7 |
| Site logging and/or mapping operations | 39.2 | 41.1 | 41.4 | 42.8 | 47.1 | 47.9 | 48.4 | 48.4 | 48.4 | 56.2 | 64.9 | 68.9 | 75.2 | 86.3 | 100.0 | 119.8 | 164.7 | 140.6 | 140.6 | 140.6 | 91.3 |
| All other service rigs | 32.2 | 33.5 | 35.0 | 36.8 | 39.4 | 41.9 | 45.3 | 45.3 | 47.1 | 53.4 | 64.2 | 72.3 | 79.3 | 87.3 | 100.0 | 112.7 | 117.0 | 123.3 | 123.3 | 123.3 | 87.8 |
| Logs & other evaluation services | 25.0 | 27.1 | 29.4 | 31.3 | 33.3 | 36.1 | 39.3 | 39.3 | 40.6 | 45.2 | 55.4 | 62.4 | 69.0 | 80.0 | 100.0 | 109.8 | 127.8 | 133.5 | 126.8 | 132.6 | 105.4 |
| Directional drilling services | 44.2 | 44.2 | 44.2 | 44.2 | 44.9 | 47.0 | 51.1 | 52.2 | 56.2 | 61.8 | 68.9 | 71.9 | 78.0 | 87.3 | 100.0 | 114.3 | 120.1 | 143.0 | 143.0 | 140.8 | 96.1 |
| Perforating | 39.2 | 39.3 | 42.6 | 43.0 | 45.6 | 49.8 | 51.6 | 51.7 | 51.7 | 57.6 | 68.1 | 75.5 | 82.4 | 89.4 | 100.0 | 120.4 | 140.8 | 153.8 | 153.8 | 153.8 | 105.6 |
| Formation testing | 40.6 | 43.8 | 45.5 | 47.1 | 49.3 | 50.7 | 54.0 | 54.2 | 55.8 | 59.7 | 75.6 | 82.0 | 86.0 | 92.1 | 100.0 | 120.8 | 141.6 | 131.4 | 117.1 | 110.6 | 115.7 |
| Cement and cementing services | 35.6 | 37.6 | 39.7 | 42.2 | 44.0 | 46.9 | 52.4 | 53.3 | 55.8 | 60.6 | 75.5 | 81.0 | 83.1 | 92.4 | 100.0 | 116.8 | 136.1 | 138.7 | 130.6 | 121.6 | 97.0 |
| Casing and tubing | 27.7 | 27.7 | 30.6 | 33.3 | 33.4 | 35.2 | 41.8 | 47.4 | 47.3 | 64.2 | 71.4 | 77.3 | 85.2 | 94.5 | 100.0 | 114.8 | 148.1 | 150.5 | 142.4 | 135.3 | 98.6 |
| Casing hardware | 27.7 | 27.7 | 30.6 | 33.3 | 33.4 | 35.2 | 41.8 | 47.4 | 47.3 | 64.2 | 71.4 | 77.3 | 85.2 | 94.5 | 100.0 | 114.8 | 148.1 | 150.5 | 142.4 | 135.3 | 98.6 |
| Special tool rentals | 41.8 | 42.1 | 43.2 | 44.6 | 46.4 | 50.9 | 52.2 | 52.2 | 59.0 | 59.0 | 67.8 | 75.0 | 87.1 | 90.3 | 100.0 | 108.2 | 121.5 | 134.4 | 134.4 | 130.1 | 100.5 |
| Drill bits and reamers | 32.7 | 33.0 | 34.3 | 37.7 | 40.8 | 43.9 | 44.5 | 47.1 | 48.1 | 54.9 | 68.2 | 73.7 | 81.2 | 90.9 | 100.0 | 114.1 | 130.6 | 135.9 | 146.6 | 146.7 | 118.0 |
| Wellhead equipment | 27.9 | 29.0 | 30.0 | 32.2 | 33.8 | 35.5 | 37.2 | 37.8 | 40.0 | 46.7 | 56.3 | 66.1 | 77.2 | 86.4 | 100.0 | 121.7 | 147.1 | 165.4 | 157.3 | 162.0 | 115.3 |
| Other equipment and supplies | 32.9 | 33.4 | 34.5 | 36.7 | 38.9 | 40.8 | 42.3 | 44.0 | 46.0 | 54.5 | 67.8 | 73.1 | 81.6 | 90.3 | 100.0 | 115.9 | 138.4 | 151.9 | 148.0 | 146.7 | 110.7 |
| Fishing | 34.6 | 36.5 | 38.7 | 41.4 | 44.5 | 49.0 | 55.1 | 59.0 | 61.5 | 61.1 | 76.0 | 80.6 | 84.6 | 92.9 | 100.0 | 110.7 | 127.3 | 135.7 | 136.6 | 138.7 | 99.4 |
| Supervision and overhead | 35.5 | 37.1 | 39.3 | 41.6 | 44.3 | 46.2 | 48.6 | 51.4 | 54.8 | 62.4 | 69.2 | 74.5 | 80.7 | 90.8 | 100.0 | 110.9 | 123.0 | 133.2 | 138.5 | 138.1 | 138.1 |
| All other expenditures | 40.8 | 41.6 | 42.3 | 43.3 | 44.8 | 46.5 | 48.2 | 49.9 | 53.3 | 65.0 | 72.5 | 77.0 | 82.5 | 88.6 | 100.0 | 116.2 | 120.6 | 132.1 | 133.5 | 136.4 | 109.0 |

Source: Independent Petroleum Association of America

48 Oil & Gas Journal, Nov. 4, 1985

Attachment 10

## U.S. IMPORTS OF CRUDE OIL AND TOTAL PETROLEUM PRODUCTS BY SOURCE, 1982-1984, AND YTD 1985

ATTACHMENT
TABLE 12

| SOURCE | THOUSAND BARRELS 1982 | 1983 | 1984 | YTD 1985 JAN-OCT | PERCENT OF TOTAL 1982 | 1983 | 1984 | YTD 1985 JAN-OCT |
|---|---|---|---|---|---|---|---|---|
| ** ARAB OPEC ** | | | | | | | | |
| ALGERIA | 61937 | 87,542 | 118,260 | 56,595 | 3.32% | 4.75% | 5.94% | 3.85% |
| IRAQ | 974 | 3,758 | 4,554 | 14,799 | 0.05% | 0.20% | 0.23% | 1.00% |
| KUWAIT | 1,886 | 4,992 | 13,136 | 5,611 | 0.10% | 0.27% | 0.66% | 0.38% |
| LIBYA | 9,360 | 0 | 213 | 1,306 | 0.50% | 0.00% | 0.01% | 0.09% |
| QATAR | 2,600 | 2 | 1,699 | 100 | 0.14% | .00% | 0.09% | 0.01% |
| SAUDI ARABIA | 201,461 | 123,091 | 118,888 | 28,203 | 10.79% | 6.68% | 5.97% | 1.91% |
| UNITED ARAB EMIRATES | 33,661 | 11,114 | 42,870 | 15,109 | 1.80% | 0.60% | 2.15% | 1.03% |
| SUBTOTAL ARAB OPEC: | 311,883 | 230,499 | 299,570 | 121,723 | 16.71% | 12.49% | 15.05% | 8.28% |
| ** OTHER OPEC ** | | | | | | | | |
| ECUADOR | 15,303 | 22,441 | 20,160 | 19,403 | 0.82% | 1.22% | 1.01% | 1.31% |
| GABON | 14,547 | 21,415 | 21,144 | 15,439 | 0.78% | 1.16% | 1.06% | 1.05% |
| INDONESIA | 90,637 | 123,488 | 125,645 | 91,400 | 4.86% | 6.70% | 6.31% | 6.18% |
| NIGERIA | 187,616 | 110,215 | 78,963 | 82,621 | 10.05% | 5.97% | 3.97% | 5.59% |
| VENEZUELA | 156,316 | 154,036 | 200,540 | 179,231 | 8.05% | 8.35% | 10.08% | 12.19% |
| SUBTOTAL OTHER OPEC: | 471,275 | 449,170 | 450,194 | 394,588 | 25.25% | 24.36% | 22.62% | 26.68% |
| ** OTHER ** | | | | | | | | |
| ANGOLA | 16,174 | 28,493 | 33,023 | 31,600 | 0.87% | 1.55% | 1.66% | 2.15% |
| AUSTRALIA | 1,885 | 1,454 | 13,750 | 11,310 | 0.10% | 0.08% | 0.69% | 0.77% |
| BAHAMAS | 23,667 | 45,581 | 32,364 | 10,524 | 1.27% | 2.47% | 1.63% | 0.71% |
| BRAZIL | 17,141 | 14,894 | 22,035 | 19,029 | 0.92% | 0.81% | 1.11% | 1.29% |
| BRUNEI | 1,853 | 597 | 0 | 0 | 0.10% | 0.03% | 0.00% | 0.00% |
| CANADA | 176,014 | 199,710 | 230,323 | 229,093 | 9.43% | 10.83% | 11.58% | 15.55% |
| CONGO | 630 | 8,495 | 14,270 | 6,321 | 0.03% | 0.46% | 0.72% | 0.43% |
| EGYPT | 15,348 | 9,107 | 3,485 | 483 | 0.82% | 0.49% | 0.18% | 0.03% |
| FRANCE | 730 | 645 | 2,159 | 3,244 | 0.04% | 0.03% | 0.11% | 0.22% |
| GHANA | 976 | 0 | 251 | * | 0.05% | 0.00% | 0.01% | 0.00% |
| LIBERIA | * | 200 | 1,882 | 676 | 0.00% | 0.01% | 0.09% | 0.05% |
| MALAYSIA | 7,307 | 1463 | 409 | 1,149 | 0.39% | 0.08% | 0.02% | 0.08% |
| MEXICO | 249,972 | 301,662 | 273,827 | 251,509 | 13.39% | 16.34% | 13.76% | 16.94% |
| NETHERLANDS | 12,730 | 23,876 | 23677 | 17,010 | 0.68% | 1.29% | 1.19% | 1.15% |
| NETHERLANDS ANTILLES | 63,806 | 68,916 | 68,812 | 11,065 | 3.42% | 3.74% | 3.46% | 0.75% |
| NORWAY | 37,299 | 23,946 | 41,744 | 9,571 | 2.00% | 1.30% | 2.10% | 0.65% |
| OMAN | 8,183 | 12,201 | 5,275 | 1,785 | 0.44% | 0.67% | 0.27% | 0.12% |
| P. R. CHINA | 14,745 | 12,305 | 16,870 | 14,872 | 0.79% | 0.67% | 0.85% | 1.01% |
| PERU | 13,567 | 11,316 | 6,710 | 7,516 | 0.73% | 0.61% | 0.34% | 0.51% |
| PUERTO RICO | 18,150 | 14,490 | 15,210 | 9,100 | 0.97% | 0.79% | 0.76% | 0.62% |
| ROMANIA | 2,195 | 10,755 | 16,868 | 13,830 | 0.12% | 0.58% | 0.85% | 0.94% |
| SPAIN | 1,167 | 794 | 3,938 | 7,161 | 0.06% | 0.04% | 0.20% | 0.49% |
| SYRIA | 195 | 154 | 0 | 376 | 0.01% | 0.01% | 0.00% | 0.03% |
| TRINIDAD & TOBAGO | 40,956 | 35,119 | 34,519 | 35,766 | 2.19% | 1.90% | 1.73% | 2.42% |
| UNITED KINGDOM | 166,325 | 139,597 | 147,174 | 98,381 | 8.91% | 7.57% | 7.40% | 6.68% |
| VIRGIN ISLANDS | 115,399 | 102,969 | 107,645 | 70,723 | 6.18% | 5.58% | 5.41% | 4.78% |
| YUGOSLAVIA | 427 | 201 | 188 | 200 | 0.02% | 0.01% | 0.01% | 0.01% |
| OTHER WESTERN HEMISPH. | 13,390 | 15,290 | 11,717 | 13,451 | 0.72% | 0.83% | 0.59% | 0.91% |
| OTHER EASTERN HEMISPH. | 61,040 | 79,752 | 111,827 | 90,667 | 3.30% | 4.33% | 5.62% | 6.17% |
| SUBTOTAL OTHER: | 1,083,199 | 1,164,075 | 1,240,162 | 962,384 | 58.04% | 63.14% | 62.32% | 65.44% |
| *** TOTAL IMPORTS *** | 1,866,330 | 1,845,744 | 1,989,935 | 1,470,697 | 100.00% | 100.00% | 100.00% | 100.00% |

* Less than 500 barrels.

SOURCE: U.S. Department of Energy, Energy Information Administration, Petroleum Supply Annual and Petroleum Supply Monthly

Attachment 11

### U.S. Imports of Motor Gasoline,
### Distillate Fuel Oil and Residual Fuel Oil
### and Total Petroleum Product Supplied, 1970 - 1985
(1,000 barrels per day)

| Year | Motor * Gasoline | Distillate Fuel Oil | Residual Fuel Oil | Total Imports of Petroleum Products | Total Petroleum Products Supplied |
|---|---|---|---|---|---|
| 1970 | 67 | 147 | 1,528 | 2,095 | 14,697 |
| 1971 | 59 | 153 | 1,583 | 2,245 | 15,213 |
| 1972 | 68 | 182 | 1,742 | 2,525 | 16,367 |
| 1973 | 134 | 392 | 1,853 | 3,012 | 17,308 |
| 1974 | 204 | 289 | 1,587 | 2,635 | 16,652 |
| 1975 | 184 | 155 | 1,223 | 1,951 | 16,322 |
| 1976 | 131 | 146 | 1,413 | 2,026 | 17,461 |
| 1977 | 217 | 250 | 1,359 | 2,193 | 18,431 |
| 1978 | 190 | 173 | 1,355 | 2,038 | 18,847 |
| 1979 | 181 | 193 | 1,151 | 1,937 | 18,516 |
| 1980 | 140 | 142 | 939 | 1,646 | 17,056 |
| 1981 | 181 | 173 | 800 | 1,599 | 16,058 |
| 1982 | 239 | 93 | 776 | 1,625 | 15 296 |
| 1983 | 294 | 174 | 699 | 1,722 | 15,231 |
| 1984 | 382 | 272 | 681 | 2,011 | 15,726 |
| 1985 (Jan-Nov) | 440 | 190 | 503 | 1,810 | 15,618 |

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* Includes blending components.

Source: U.S. Dep't of Energy, Energy Information Administration, Annual Energy Review (1983); Petroleum Supply Monthly (March, 1985); American Petroleum Institute, Basic Petroleum Data Book, Volume V, Number 2 (May 1985).

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Senator HECHT. Thank you, very much. Thank you for summarizing.

Mr. Bolch.

## STATEMENT OF CARL BOLCH, JR., PRESIDENT AND CHAIRMAN OF THE BOARD, RACETRAC PETROLEUM, INC.

Mr. BOLCH. My name is Carl Bolch. I am the president and chairman of the board of Racetrac Petroleum. We are headquartered in Atlanta, GA, and operate stations in 12 Southern States. Today, I appear on behalf of the Society of Independent Gasoline Marketers of America, commonly referred to as SIGMA.

SIGMA members account for approximatley 20 percent of the gasoline sales at the retail level in the United States and our members are spread across all of the States of the United States.

SIGMA is opposed to any tax on imports, and in particular, to any differential in posing a higher tax on petroleum products than on crude oil. Independent marketers and chain retailers are the most price competitive segment of the retail gasoline market. SIGMA members obtain much wholesale supply from the same refiners against which we compete. Access to foreign products is the important factor which assures that competitively priced wholesale product is available.

Imports function as an addition to total supply. More important, imports induce competitive pricing by domestic refiners. An oil import tax is not sound energy policy. It is an invitation to repeat the mistakes of the past. The mandatory oil import program of the 1960's distorted the free market. It shielded the domestic industry from competition and encouraged the depletion of domestic reserves. It limited supplies of imports and, thus, reduced our access to competitively priced gasoline.

By protecting domestic companies from world competition, this program resulted in higher prices and created a vast bureaucracy, charged with its administration, as well as an additional bureaurcracy for granting exceptions.

The policies of the 1960's laid the groundwork for the oil crisis of the 1970's. Import controls were lifted in the spring of 1973 because they had caused severe domestic shortages. America then rushed out into the world market, before supplies could adjust. The Arabs recognized our vulnerability and took advantage of it.

Aided by price and allocation controls, worldwide prices of crude oil spiraled upward throughout the 1970's until President Reagan decontrolled oil in 1981.

The old crude prices began to erode and have been falling ever since. The shortages of the 1970's were not physical shortages. Government interference caused market distortion. Since deregulation, independent marketers have had access to competitively priced supply and our efficiencies have enabled us to become the most competitive sector of the oil industry.

Why do some in the industry advocate an import tax? Only one reason: They want an advantage for themselves. Certain refiners are trying to tilt the playing field in their direction by restricting imports. The decline in U.S. refining capacity since 1981 has not been caused by imports, but by overcapacity and reduced demand.

The only refineries that have closed have been the small, inefficient refiners, many of which were created to take advantage of the regulatory incentives of the 1970's. Far from flooding the market, gasoline imports are less than 6 percent of U.S. consumption, and falling.

SIGMA is particularly opposed to a different oil import tax, imposing a higher level on gasoline than on crude oil because it would foreclose imports as a supply source. Furthermore, American Petroleum Institute studies indicate that refiners' environmental costs do not justify any additional differentials.

In conclusion, the availability of imports is crucial to our competitive viability. Our access to imports keeps domestic refiners honest by ensuring a level playing field in the petroleum business. It is in our country's interest to preserve the competitively neutral conditions that exist today in the oil industry from which our Nation has benefited so much since 1981.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Bolch follows:]

UNITED STATES SENATE

COMMITTEE ON ENERGY

AND NATURAL RESOURCES

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# STATEMENT OF CARL BOLCH, JR.
ON BEHALF OF
THE SOCIETY OF INDEPENDENT GASOLINE MARKETERS OF AMERICA

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## REGARDING PROPOSALS
## FOR AN OIL IMPORT TAX

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MARCH 28, 1986

## EXECUTIVE SUMMARY OF STATEMENT OF CARL BOLCH, JR. ON BEHALF OF THE SOCIETY OF INDEPENDENT GASOLINE MARKETERS OF AMERICA BEFORE THE COMMITTEE ON ENERGY AND NATURAL RESOURCES

- The Society of Independent Gasoline Marketers of America ("SIGMA") opposes any tax on imports of crude oil and petroleum products, and in particular, any tax that imposes a higher tax on petroleum products than on crude oil.

- Independent marketers are the most price competitive segment of the oil industry and have provided consumers with the benefits of their cost and marketing efficiencies.

- Access to competitively priced imports is essential to independent marketers' competitive viability. Such access is the primary inducement to U.S. refiners to supply gasoline at competitive prices to marketers with which they compete in the retail market.

- The present neutral policy with respect to oil imports is far sounder than an oil import tax. The present policy has had beneficial results. Oil prices are down, and U.S. sources of supply are more diversified and secure than in the 1970s.

- An oil import tax would be bad policy. It would constitute a return to market distorting government regulation. In the past, government intervention to limit imports created market distortions, resulting in the premature use of America's cheap reserves, and culminating in the artificial shortages and price explosions of the 1970s. An oil import tax again would induce the U.S. to deplete its reserves prematurely and could lead to artificial shortages and another price explosion.

- An oil import tax would have a negative impact on independent marketers. Such a tax would increase marketers' costs and enhance the competitive position of their integrated competitors.

- Imposition of a higher tax on products than is imposed on crude oil would be especially detrimental to marketers and U.S. consumers. Such a tax would virtually eliminate imports and thus threaten marketers' continued viability. U.S. consumers would lose the benefit of marketers' competitiveness.

- An oil import tax inevitably would spawn a vast, expensive and inequitable bureaucracy similar to that of the 1970s.

- Certain refiners have urged an oil import tax as necessary protection against imports. There is no basis for such protectionism because imports are not the source of U.S. refiners' problems.

- Certain refiners also have argued that a differential tax is needed to enable them to meet their special "environmental costs." Industry statistics, however, indicate that such costs are far less than the differential tax that is sought.

United States Senate
Committee on Energy
and Natural Resources

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## Statement of Carl Bolch, Jr. on Behalf of the Society of Independent Gasoline Marketers of America

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My name is Carl Bolch, Jr. I am Chairman of the Board and Chief Executive Officer of Racetrac Petroleum, Inc., of Atlanta, Georgia, and First Vice President of the Society of Independent Gasoline Marketers of America, on behalf of which I appear today. My company, Racetrac Petroleum, Inc. owns and operates 250 retail gasoline outlets in twelve southern states. SIGMA is a national trade association comprised of 282 independent marketers and chain retailers of motor fuels. SIGMA's members market refined petroleum products in all 50 states and account for approximately 20 percent of the U.S. retail market for motor gasoline.

The purpose of these hearings is to review the domestic and international implications of a tax on imported oil.

### The Role of Independent Marketers and Chain Retailers in the Oil Industry

Independent marketers and chain retailers compete not only directly with one another, but also with the downstream marketing and retailing operations of refiners. Independent marketers and chain retailers have had a beneficial impact on price competition in the retail gasoline marketplace. We have introduced such innovative marketing devices as self service, high volume/low margin marketing, and automated retail marketing. These pioneering marketing concepts and superior systems of cost controls have induced price competition in the domestic market for gasoline. Independent marketers and chain retailers historically have been recognized as the most price competitive segment of the retail gasoline market.

We neither produce nor refine crude oil. Thus, we are entirely dependent upon third parties for our sources of supply. The prices at which we can obtain refined petroleum products are critical. In the absence of competitively priced products, the efficiencies and innovations of independent marketers and chain retailers would be largely irrelevant, and we could not survive.

## The Relationship Between Independent Marketers and Their Supplier-Competitors

SIGMA's members compete directly at the retail level with refiners which market the petroleum products that they refine. We obtain much of our supply of product at wholesale from the same refiners against which we compete. Therefore, in the current market, access to foreign products is the single most important factor which assures that competitively priced product will be available.

Access to foreign product assures the existence of competitive wholesale market products in two ways: (1) imports function as an obvious addition to total supply; and, more importantly; (2) the availability of foreign products to participants in the U.S. market induces competitive pricing by domestic refiners who otherwise would have no incentive to deal on a competitive basis with their marketer-competitors. Indeed, access to foreign markets (and not the volume of such product actually imported) constitutes the principal incentive for refiners to sell us competitively priced products. Absent this incentive, competition at the retail level of the gasoline market would be reduced significantly.

## Inadvisability of an Oil Import Tax

SIGMA is opposed to any tax on imports of crude oil and petroleum products, and in particular, to any differential which imposes a higher tax on petroleum products than on crude oil. Proponents of an oil import tax have attempted to justify such a tax on the following grounds. First, they have proposed an oil import tax with a differential as a means of protecting the domestic refining industry. Second, the tax has been hailed as a way of ensuring the U.S. national security. Third and more recently, a tax on crude oil and products has been advanced as good energy policy. Fourth, and especially since the enactment of Gramm-Rudman-Hollings, proponents of an oil import tax on crude oil and products have suggested it as a possible revenue raising measure.

There are many reasons why each of these purported justifications for an oil import tax cannot be sustained. Appendix A which is attached outlines the reasons why an oil import tax is not an efficient revenue raising tool or an effective means of ensuring U.S. energy independence and national security. My testimony, however, will address only the issue about which SIGMA is most knowledgeable, that is, the effects of an oil import tax on gasoline marketing.

From the standpoint of the independent marketer, there is no question that the present policy with respect to imports is the soundest. For the first time in decades, U.S. energy policy is essentially neutral with respect to imported crude oil and petroleum products. The present policy, by removing government intervention, has provided a level playing field for all sectors of the oil industry. By dismantling many of the governmental protections previously afforded to crude oil producers and refiners, we have allowed the forces of supply and demand to operate, thereby minimizing market distortion. The effects of deregulation have been beneficial. Prices of oil have declined. U.S. sources of supply are diversified and much more secure than in the 1970s.[1/] That is a far cry from the situation in 1977, when 43 percent of our crude and product imports came from suppliers in the Middle East.

Nevertheless, proponents of an oil import tax would alter present U.S. policy by again injecting government regulation into the marketplace. Proponents of a tax have attempted to justify this government intervention on the ground that the absence of controls on oil imports could lead to dependence on imported energy. They argue that an oil import tax would be an effective policy for preventing such dependence because a tax will stimulate domestic exploration and exploitation of new reserves and reduce domestic consumption.

An oil import tax, far from being sound energy policy, is an invitation to repeat the mistakes of the past. The lessons of the last four decades demonstrate that a competitively neutral policy is the soundest. Senator Malcolm Wallop has correctly stated that "to ignore the disruptive and inflationary results of our past failures in energy planning . . . would be irresponsible." An examination of our energy policy in the 1960s and the 1970s should be enough to convince us that the present neutral policy is far sounder.

In the 1960s, when foreign oil was cheap and could be purchased at close to its economic cost of production, U.S. policy discouraged imports of oil. The Mandatory Oil Import Program, which was adopted at the behest of U.S. crude producers, restricted the volume of oil imports to a level based on imports just prior to enactment. This program was justified to the American public as necessary to "meet the national defense requirements of the United States." In fact, the program distorted the free market by

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1/ Today, nearly 60 percent of U.S. imports of crude oil and petroleum products comes from suppliers in the Western Hemisphere. Only 9 percent of crude and product imports comes from Middle Eastern suppliers.

shielding the domestic industry from competition and encouraging the exploitation of domestic reserves.

The Mandatory Oil Import Program had a particularly negative impact on independent marketers and chain retailers. The program limited supplies of imported petroleum products and thus reduced independent marketers' and chain retailers' access to competitively priced motor fuels. Oil import controls caused a number of independent marketers and chain retailers to suffer considerable losses. Many marketers and chain retailers were on the edge of bankruptcy because of the limited access to competitively priced supply.

The Percentage Depletion Allowance, first enacted in the 1920s and continued through the 1960s and early 1970s permitted U.S. producers to deduct from their gross taxable income 27.5 percent of gross sales from domestic crude oil production. (This percentage was reduced to 22 percent in 1969.) Integrated oil companies were allowed to deduct this percentage from the internal transfer price to their own refineries. The internal transfer price was set with little regard to arms-length transactions and quite naturally became the highest price the integrated company could justify to the tax auditor. Inevitably, integrated companies had high transfer prices for crude, with resulting high percentage depletion allowances. Profits were concentrated at the crude oil level, causing certain integrated companies to support continued import controls.

The Percentage Depletion Allowance, like the Mandatory Oil Import Program, had a negative impact on independent marketers and chain retailers. The allowance created market distortions because it permitted disproportionate profitability at the crude production level. Integrated companies used refining and marketing as simply the vehicles for disposing of crude oil production rather than concerning themselves with earning refining and marketing profits. With integrated companies selling their product at extremely low margins, independent marketers and chain retailers--which had limited access to imported petroleum products--were hard pressed to remain economically viable.

The effect of these programs was to drain America first, leaving smaller, more costly reserves available at home for the future. While this occurred, cheap foreign oil that should have been exploited first -- before our reserves -- was not exploited by the United States. In addition, these programs resulted in higher retail oil prices than would otherwise have been the case.

These programs also resulted in the creation of a vast federal bureaucracy charged with their administration. The Mandatory Oil Import Program, for example, necessitated an extensive and complex administrative apparatus to implement its essential features, namely, control of imports through a quota with allocations to individual U.S. importers. A set of complex rules and regulations became necessary to determine precise individual allocations. These allocations, which were implemented through a licensing procedure, were based on a number of factors including historical importing levels, and percentage of "refinery inputs" reported. The allocation rules inevitably gave rise to an apparatus for granting exceptions based on hardship or other factors. The Oil Import Appeal Board was created to determine the appropriateness of requests for exceptions as well as to decide other questions relating to individual allocations. The result of the oil import program was to put the government in the business of policing oil imports and to impose a complex system of regulation on an industry that, prior to the 1960s, had been relatively free of government controls.

The policies of the 1960s laid the groundwork for the oil crises of the 1970s. Restrictions on imports under the Mandatory Oil Import Program, coupled with price controls imposed by President Nixon in 1971, created shortages in the United States and enormous pent-up demand. When President Nixon lifted import controls in 1973, America's oil industry quickly sought to import large quantities of crude oil from foreign producers that were unprepared to meet such increased U.S. demand. In effect, by attempting to isolate the United States from world crude oil markets, government intervention had made the country critically dependent on these markets during a period of burgeoning demand.

The government regulation of the 1970s again ensured the existence of a vast and expensive government bureaucracy. As with the Mandatory Oil Import Program, price and subsequently imposed allocation controls necessitated the creation of an extraordinarily complex set of regulations and procedures for determining price limits and product allocations in individual cases. These programs also inevitably gave rise to their own bureaucracy and another complex set of regulations for granting exceptions. The result was to involve the government in policing oil prices and allocation.

When Arab OPEC nations imposed an embargo in the fall of 1973 in retribution for our policies in the Arab-Israeli conflict, the United States was vulnerable. Price and allocation controls, based on historical levels of usage, restricted the movement of those petroleum products that were available in this country. The result was regional shortages that were the consequence not of physical shortfalls, but of government regulation. The same situation also occured in 1979, following the Iranian revolution. On both occasions, shortages occurred because U.S. producers could not totally replace the disrupted supplies. Import controls in the 1960s and early 1970s, by removing the United States from world oil commerce, had made us unnecessarily vulnerable to political pressures surrounding oil supply and had caused the United States to deplete much of its reserves with no consequent strategic or political benefit.

Worldwide prices of crude oil spiraled upward until they reached a peak in early 1981, when President Reagan dismantled price and allocation controls. World crude prices immediately began to erode and have been falling ever since. The so-called shortage of the 1970s was revealed for what it really was—not a physical shortage, but a market distortion created by government interference.

Currently, with the price of oil drifting down towards the economic costs of production, certain interest groups again are calling for a policy restricting imports. Such a policy inevitably would cause distortion in the U.S. and world oil markets as it did in the 1960s and 1970s. U.S. producers would be encouraged to deplete remaining U.S. reserves, while cheaper foreign oil would not be consumed. The stage once again would be set for a price explosion similar to that which occurred in the 1970s.

A neutral policy with respect to imports not only is better energy policy, but also is a necessary condition for independent marketers to compete. Before import controls on finished product were lifted in the 1970s, many independent marketers were not profitable because of difficulties in obtaining competitively priced supplies. With only limited imported product available, domestic refiners had less incentive than at present to sell their motor fuel to independent marketers at competitive prices. As a result, we were at a significant disadvantage vis a vis other sectors of the industry and were less able to compete effectively.

During the five years since deregulation, independent marketers have had access to competitively priced supply and have been able to capitalize on their efficiencies to become the most competitive sector of the oil industry. Consumers have been able to realize significant savings in their energy bills and have been able to reallocate their spending in a way that has permitted economic growth. Instead of making already wealthy oil companies richer (as would an oil import tax), the current competitively neutral policy has encouraged resource allocation in a much more productive and beneficial manner.

In reality, it is impossible to determine a uniform tax on crude oil and refined petroleum products, such as gasoline, since all crude oil is not fungible. For example, there is sweet crude, sour crude, heavy crude and light crude. Moreover, a barrel of crude oil can be refined into a vast array of finished products. While in theory it may be possible to establish a tax on finished product imports and crude imports that are equivalent, in reality such taxes would create a labyrinth of choices between importing crude oil and various finished products. Such choices would be subject to continual revision as markets for the various crude oils and finished products change. In addition, they would not necessarily reflect the true economic differentials of the crude oil or finished product imports. Accordingly, crude and finished products cannot be treated uniformly for tax purposes.

Nevertheless, a differential tax imposing a higher levy on imports of petroleum products than on crude oil would be even more detrimental to independent marketers and U.S. consumers. Such a tax would virtually eliminate product imports and thus cause our efficiencies to become less relevant. With competition from independent marketers gone, domestic refiners would have little incentive to lower their gasoline prices below the after-tax level. U.S. consumers would join SIGMA members as principal losers, while domestic refiners would benefit enormously.

An oil import tax (either uniform or with a differential) would distort the petroleum product market in an additional but more subtle way. By causing an increase in domestic and imported crude prices, a tax could prompt the integrated oil companies to make decisions regarding downstream product pricing that do not reflect market considerations. Without government intervention, it should be in the interest of integrated companies to make a profit at each stage of their operations. The import control and percentage depletion allowance programs of the 1960s and 1970s, however, permitted integrated companies to concentrate their profits at the crude oil production stage and place little emphasis on developing competitive refining and marketing operations.

An oil import tax similarly would lessen the integrated companies' incentive to increase the efficiencies and profitability of their refining and marketing operations. A tax would increase the price of domestic crude oil significantly, and thus permit integrated oil companies once again to concentrate profits at the crude oil production level. As a result, integrated oil companies would be able to sell their own refined products with little concern for the profitability of their downstream operations, in order simply to move their petroleum product inventories. The downward pressure on product margins caused by such market distortion would penalize marketers and chain retailers. With increased supply costs (also due to the effects of the tax), we again would be hard pressed to remain economically viable.

Certain refiners have urged an oil import tax on petroleum products on the ground that the domestic refining industry needs protection from petroleum product imports. These refiners are not interested in a level playing field between the domestic and foreign refining industries, but rather in one clearly tilted in their direction. The cost of such protectionism would be enormous. More importantly, imports are not the source of those domestic refiners' problem.

The cause of the decline in U.S. refining capacity since 1981 has been the change in conditions in the U.S. refining market. Prior to 1981, the entitlements program and crude oil price controls created incentives for the construction and expansion of domestic refining capacity. Domestic price and allocation controls directed the development of the domestic industry while OPEC policies dominated the foreign crude and refining markets. Construction of new facilities outpaced growth in product demand, leading to a capacity surplus in 1980 for the first time since 1962.

With decontrol in 1981, free trade and competition returned as the norm to an industry that had learned to look to the government for the establishment of goals and incentives. The result was a rude shock to all within the petroleum industry -- crude producers, refiners and OPEC member states. The resulting overcapacity in crude production and refining capacity is well-documented and, in fact, admitted by those seeking protectionist legislation. The decline in U.S. refining capacity since 1981 has not been caused by imports but by overcapacity and reduced demand. The only refineries that have closed have been the small, inefficient refineries, many of which were created to take advantage of the regulatory incentives of the 1970s. The process is continuing and is the natural result of marketplace adjustments. There is no question that in this period of adjustment between declining demand and overly optimistic construction of new refineries, there will be financial victims. The likely victims will be the inefficient and financially weak refineries that are unable to compete in the absence of government intervention and artificial support.

Those seeking protectionist legislation would like you to believe that their problems are being caused by an overwhelming flood of imports. The facts show that the reduction in U.S. refining capacity during the past five years is not the result of petroleum product imports. At a time when the United States is experiencing an increase in foreign manufactured imports, finished motor gasoline imports constituted only 5.5 percent of U.S. consumption during 1985. U.S. imports of total finished petroleum products averaged only 8.6 percent of U.S. demand for the first eleven months of 1985. Excluding residual fuel oil, finished product imports fell from 6 percent in 1984 to 5.5 percent for January through November 1985.

Much is made of the number of refineries which have closed since January 1981. Most of the refineries that have closed since 1981 are those small refineries that benefitted from government protection in the 1970s. Thus, over 85 percent of the 111 refineries reported to have ceased production as of January 1, 1985 were refineries with less than 50,000 barrels per day production capacity. Seventy-five had a capacity of 30,000 barrels per day or less. Forty-four of those refineries were opened immediately prior to or during the period of small refiner protection. Preliminary figures from the U.S. Department of Energy show that eleven more refineries closed during 1985. (In addition, six new refineries were opened or reactivated.) Ten of the eleven refineries that closed had a capacity of less than 30,000 barrels per day. [2/] The vast majority of

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2/ U.S. Department of Energy, Energy Information Administration, Petroleum Supply Annual 1984, Vol. I (1985); Petroleum Supply Monthly, November 1985 (January 1986).

other refineries that have closed since 1981 have been older outmoded plants. These facilities have not been efficient enough to be economically viable in a deregulated highly competitive market, particularly as demand has both declined and shifted away from residual fuels (which the older, inefficient refineries could produce profitably) to lighter products. The trend in U.S. refinery closures has reflected a worldwide trend since the early 1980s as petroleum product demand has declined and shifted worldwide.

Those refiners that are efficient generally were quite profitable in 1985, at a time when imports purportedly were threatening U.S. refining capacity. During the first and second quarters in 1985 all of the largest thirteen integrated and independent refiners except one earned sizable profits. In addition, eight of the thirteen principal refiners reported increased profits from the first quarter to the second quarter of 1985. During the third quarter of 1985, eleven of the thirteen major refiners were profitable, and five of these companies reported net gains from the second quarter.

Certain refiners point to imports of products from Arab OPEC refineries, arguing that they constitute a threat from which the U.S. industry needs protection. There is no indication of any such threat in the foreseeable future. [3] Even if an additional 1 to 1.2 million barrels per day of petroleum products were added to the world's supply, there would be little if any displacement of U.S. or other refinery capacity. Such an increment represents only about 3 percent of the current free world demand of approximately 46 million barrels per day. [4] More importantly, all indications are that product imports into the United States from the Middle East will remain at relatively low levels. Despite the opening of several new refineries, imports from these sources are at low levels and have not increased appreciably. Product imports from Saudi Arabia, for example, were only 2 percent of total imports through the first eleven months of 1985. Indeed, far from increasing their production, the Saudis have taken steps to curtail their product output. Thus, Saudi refiners recently have postponed indefinitely plans for two new refineries, at Riyadh and Ras Tanora, that would have expanded production capacity by 450,000 barrels per day.

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[3] Indeed, a study recently prepared for the U.S. Department of Energy concluded that the present level of imports from Saudi Arabia cannot possibly be regarded as a national security threat. See, Resource Systems Institute, East-West Center, The Changing Structure of the World Refining Industry: Implications for the United States and Other Major Consuming Nations (Prepared for U.S. Department of Energy) (Feb. 1985), at vi, 58. See also Appendix A, attached hereto.

[4] Impact of Imported Petroleum Products on the Domestic Petroleum Industry, Hearing Before the House Committee on Energy and Natural Resources, Subcommittee on Energy Regulation and Conservation, 99th Cong., 1st Sess. (June 4, 1985) (Testimony of Danny J. Boggs, Deputy Secretary, U.S. Department of Energy), at 18.

Several factors militate against any significant increase in Arab OPEC imports. First, the natural market for these products will be Western Europe and Japan, and not the United States. The sale of products at official prices (or less) in the U.S. market will result in fewer profits to Arab OPEC refiners because of the high cost of transportation, thus discouraging significant exporting to the United States.[5] Second, it appears likely that more profitable Western European and Japanese markets will exist for Arab OPEC exports during the foreseeable future. Western European members of the International Energy Agency ("IEA") have pledged to maintain a free market for petroleum product imports. Recent actions on the part of the Japanese government suggest that traditional barriers to light product imports in that country will be removed.

In short, there appears to be no basis for enacting an oil import tax as a means to protect the U.S. refining industry. Such a measure would have a negative impact on independent marketers and chain retailers, without accomplishing the purpose for which it was intended. Contrary to the assertions of certain refiners, the U.S. oil

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5/ In addition, there is no indication that imports into Western Europe of petroleum products from Saudi Arabia will displace production in those countries, and thus cause increased product exports from Western Europe to the United States. A recent report prepared by E. B. Brossard, Director of Policy Analysis for the Louisiana State University Center for Energy Studies concluded that Mobil Corporation's share of the new Yanbu refinery's production will primarily be used to fill the gap left by the closing of Mobil's Wilhelmshaven, West Germany refinery. The Oil Daily, October 23, 1985, at 2.

industry as a whole would be better served by a policy that continued to allow the free market to operate.

Finally, history has shown that oil import taxes and quota programs inevitably spawn a vast, expensive and inequitable government bureaucracy. The bureaucracy required to administer such programs as the Mandatory Oil Import Program is a case in point. The complex regulations and exceptions procedures created under that program constituted unnecessary government intervention in an industry that would have served U.S. consumers far better had it been left unregulated. Adoption of an oil import tax would necessitate the re-establishment of a similar administrative apparatus to implement the tax and to deal with the inevitable exception requests. Indeed, some of the legislation that has been proposed already envisions exemptions from the tax's application. Senator David Boren has introduced legislation, for example, that would exempt, from an oil import tax, heating oil and oil intended for producers of U.S. exports. The likely difficulties that would be encountered in determining how to apply such exemptions are reminiscent of the complex and involved regulatory problems that arose under the Mandatory Oil Import Program and price and allocation controls.

The expense, and administrative burdens of renewed regulation of oil imports hardly seem justified in light of the considerable disadvantages of government intervention in the marketplace. Only with a neutral policy with respect to oil imports can this country enjoy the benefits of low-priced energy, without the negative effects of government intervention in the market.

## Inadvisability of a Differential Tax on Oil Imports

SIGMA is particularly opposed to a differential oil import tax imposing a higher level on finished products than on crude oil because such a measure would be especially injurious to independent marketers and chain retailers and to U.S. consumers, while benefitting only a narrow sector of the U.S. economy. A differential tax would weaken our competitive position by foreclosing imported products as a source of supply. The higher levy on product imports would price us out of the market. With imports gone, domestic refiners would have little further incentive to sell motor fuels to independent marketers and chain retailers at competitive prices. In the absence of competition from independent marketers and chain retailers, domestic refiners could raise their gasoline price considerably, even after paying an increased amount for the crude oil that they purchase and refine.

It is not surprising that certain independent refiners are strongly in favor of such a measure. Indeed, a differential tax is the only measure that would be to the independent refiners' advantage. They cannot support a uniform tax because such a measure would increase independent refiners' production costs without permitting them to make any additional profit and at the same time would grant to the integrated competitors a significant advantage.

Predictably, virtually the only proponents of a differential tax are the independent domestic refiners. They stand to gain enormously from such a measure, but at what cost? The imposition of a higher tax on petroleum products including gasoline would be a significant blow to consumers and to independent marketers. Such a trade restraint would raise the price of gasoline in an amount equal to the tax. Moreover, the price of petroleum products including gasoline and other motor fuels would be increased additionally by an amount equal to the value of the independent marketers' efficiencies rendered less relevant by the tax. Since imports are not the cause of refiners' problems, a differential cannot be viewed as necessary to protect the industry from foreign competition. Its real purpose is to alter the present competitively neutral conditions in the oil industry, at the expense of independent marketers and U.S. consumers.

The domestic refining industry has argued that it needs a higher levy on refined products to meet its special "environmental costs" and thus stay competitive.

Senator Wallop recently introduced a bill, S. 1997, that contains a $3 differential ostensibly designed to offset refiners' "environmental costs."

There appears to be no basis for such an additional differential to cover U.S. refiners' environmental costs.[6/] Based on data from the American Petroleum Institute,[7/] it is difficult to believe that refiners' environmental costs total the amount of differential sought. API's figures indicate that total environmental expenditures for manufacturing, including capital and operating and administrative expenses amounted to less than 60 cents per barrel over the ten year period ending in 1983. These figures are based on responses to an American Petroleum Institute questionnaire from companies representing 77 percent of U.S. refining capacity. The 60 cents per barrel figure includes expenditures (such as those to ensure compliance with the Clean Air and Water Acts) required of all U.S. refiners. It also includes expenditures (such as those connected with production of unleaded gasoline) required by U.S. law of all refiners, foreign or domestic, who intend to sell in the U.S. market. If these latter environmental expenses are excluded, the cost per barrel to U.S. refiners would be even less than the 60 cents per barrel indicated by the refining industry itself. The current tariffs on many refined products already provide a substantial offset to such costs. For example, the present tariff on motor fuel imports of 52.5 cents per barrel would appear to permit domestic refiners to cover most or all of the environmental costs associated with the refining of gasoline.

API figures also indicate that refiners' total environmental expenses, including research and development, amounted to no more than 65 cents per barrel over the ten year period ending in 1983. This figure again is much less than the differential

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6/ Indeed, Congress has not provided tariff increases to offset the environmental expenditures of other industries such as steel and agriculture that also incur environmental costs as part of their manufacturing operations.

7/ American Petroleum Institute, Environmental Expenditures of the United States Petroleum Industry 1974-1983, Publication No. 4384.

tax which U.S. refiners claim they need to offset environmental costs. It seems more likely that the refiners' articulated reason for a differential is simply a pretext to gain an advantage over other more competitive sectors of the oil industry.

## Conclusion

In conclusion, it is important to understand the role that imports play in the operation of the domestic motor fuels market. The availability of such products is crucial to the competitive viability of the independent marketers and chain retailers, not because imports actually provide substantial volumes of supply, but because the availability of foreign products as an alternative source of supply serves as the principal inducement to domestic refiners to sell competitively priced motor fuels to their marketer-competitors.

An oil import tax would cause a disruption in the supply of imports that independent marketers need both to stay competitive and to provide the benefits that their efficiencies enable them to afford to U.S. consumers. At this juncture, the American people would be better served if Congress preserved the level playing field that our current neutral import policy has brought us. U.S. consumers have gained, U.S. industry has gained, and the U.S. economy has gained. There is no good reason to alter present market conditions with measures, such as an oil import tax, that provide far fewer benefits than the costs they impose.

## APPENDIX A

## AN OIL IMPORT TAX WILL NOT PROMOTE U.S. ENERGY INDEPENDENCE

Proponents of an oil import tax who attempt to rationalize the measure as a means of promoting energy independence misstate both the potential problem and the solution. As the largest energy consumer in the world, the United States will always have a demand for oil that exceeds domestic production. Remaining U.S. reserves are limited, in part because of the policies of the 1960s. Intensive exploration and development have not been able to keep reserves up. About 15 percent of the free world's undiscovered reserves are in the United States, but more than one-half of the exploration activity and 80 percent of the drilling activity since 1985 have been concentrated in this country. More wells were drilled in the U.S. between 1980 and 1984 than in the previous decade. Despite this exploration and drilling, and a decline in U.S. consumption of more than 10 percent, this country has experienced a steady decline in its reserve/production ratio.

Due to depletion of cheaper reserves, overall U.S. production also has declined. Between 1970 and 1983, for example, domestic production declined nearly 10 percent, despite an eight-fold increase in the price at the well-head, and more than a two-fold increase in the number of wells completed each year over the same period. The Department of Energy has concluded that there will be continued long-term declines in domestic reserves and production, even if prices increase significantly. By the year 2010, U.S. reserves will be less than one-half of the 1984 level, and oil production will be down 25 percent.

Because the United States will always require a certain level of imports, a tax cannot result in complete energy independence. A tax may slow the decline in U.S. production by encouraging the discovery and exploitation of remaining untapped reserves. Such a measure, however, also creates an incentive to deplete this country's resources. Without a tax, America's resources ultimately would be developed when they became economically competitive. With a tax, U.S. producers again would drain America first of its remaining reserves at a time when U.S. access to foreign oil has never been more stable or secure. Under the present circumstances, limiting imports with a tax does not make sense. Such a policy is based on the illogical notion that since foreign oil is now cheaper, we ought to be using less of it.

What the United States must avoid is not imports, but vulnerability to supply disruptions. The present neutral policy has accomplished this by ensuring supply diversification. In addition, it has led to greater energy security as Western Hemisphere suppliers have become our principal sources of supply. By creating market distortions, on the other hand, an oil import tax might actually lead to renewed supply disruptions such as those that occurred in the 1970s.

The assertion that an oil import tax is needed to reduce U.S. oil demand similarly is flawed. The facts show that a dampening of U.S. demand is not needed at this time. Total energy demand fell by 3 percent and total oil demand fell by 17 percent between 1973 and 1983. These declines occurred despite a 25 percent growth in the industrial world economy over the same period. Reflecting this trend, U.S. demand for petroleum products has declined consistently over the last six years, from 6.8 billion barrels in 1978 to 5.7 billion barrels in 1985. This decline in demand has occurred even as the cost of crude oil has declined. The Energy Information Agency has concluded that U.S. energy consumption per dollar of GNP has begun declining at a faster rate than at any point in the past several decades.

A further decline in oil prices (to levels still above those in the 1970s) will not reverse this decline in demand in the short term. Similarly, because demand for oil is relatively inelastic, an oil import tax will have relatively little impact on consumption. The Consumer Federation of America has estimated that even a $10 per barrel tax (which would raise prices by 40 percent) would reduce demand by no more than 500,000 barrels per day in the short term. Actual conservation would be even less if consumers viewed the tax as only a temporary measure. A 500,000 barrel per day reduction is only slightly more than 3 percent of current U.S. consumption. Given the costs of a tax, such relatively small reductions in demand can hardly be justified. If increased conservation is desired, then more cost effective means should be pursued.

## AN OIL IMPORT TAX IS NOT NECESSARY TO ENSURE U.S. NATIONAL SECURITY

Proponents of an oil import tax contend that it is needed to protect the U.S. national security. In particular, certain refiners have argued that the national security is threatened by the continued decline in U.S. refining capacity. This assertion is fallacious for two reasons. First, imports are not the cause of the decline in U.S. refining capacity. Thus, a fee would have little or no effect on the conditions in the refining industry. Second, the situation at present, and for the foreseeable future, is not one in which there is a threat to the national security.

The United States has ample refining capacity in case of an emergency. Testimony by the Department of Defense, the Department of Energy and others, has stressed that there is no threat at current or foreseeable U.S. refining levels. 1/ Moreover, Department of Energy statistics show that despite recent declines, the United States has more than enough refining capacity to meet domestic needs, both during peace-time and in the event of a military mobilization. Current demand for all petroleum products equals approximately 15.7 million barrels per day. 2/ According to the Department of Defense, its petroleum product requirements would increase fourfold to approximately 2 million barrels per day in the event of a major military mobilization. 3/

Present refining capacity is 15.8 billion barrels per day, of which approximately 14.7 million barrels per day is actual operating capacity, and 1.1 million

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1/ See, e.g., Impact of Imported Petroleum Products on the Domestic Petroleum Industry, Hearing Before the House Committee on Energy and Natural Resources, Subcommittee on Energy Regulation and Conservation, 99th Cong., 1st Sess. (June 4, 1985) ("Hearing") (Testimony of Danny J. Boggs, Deputy Secretary, U.S. Department of Energy).

2/ U.S. Department of Energy, Energy Information Administration, Petroleum Supply Monthly, November 1985 (January 1986).

3/ See Hearing, supra, note 1, at 94-95.

barrels per day is operable capacity that could begin producing within 30 to 90 days in the event of increased demand.[4] In addition, since these capacity numbers are expressed in terms of crude input, domestic refiners generate an additional "refining gain"[5] of approximately 550,000 barrels per day in output over input.[6] The United States also produces over 1.5 million barrels per day of natural gas liquids which are not refined, but which are consumed as petroleum products. In short, at present production levels, U.S. refiners could produce approximately 17.7 million barrels per day rather than the current demand of 15.7 million barrels per day.

This capacity to produce at least 2 million barrels per day in excess of current demand indicates that there is sufficient capacity to meet the military's requirements in the event of a mobilization, and still permit the requirements of the civilian population to be met. Furthermore, if U.S. refiners increased their production to 90 percent capacity, or to full capacity, the resulting additional processing gain would create an even greater product supply. At 90 percent capacity, U.S. refiners would generate approximately 1.4 million barrels per day in refining gain. At 100 percent capacity, they would generate as much as 2.8 million barrels per day gain.[7] While U.S. refiners do not produce at 100 percent capacity under normal conditions, in a crisis they could increase output to such levels.

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4/ U.S. Department of Energy, Energy Information Administration, Petroleum Supply Monthly, November 1985 (January 1986). The Department of Energy defines "operable capacity" as the amount of capacity that is capable of being placed in operation within 30 days or, if under active repairs, can be put into operation within 90 days.

5/ A refining gain results when "heavy" crude oil is refined into "lighter" products. Under such circumstances a barrel of feedstocks may generate more than a barrel of products.

6/ U.S. Department of Energy, Energy Information Administration, Petroleum Supply Annual 1984, Vol. I (1985).

7/ Resource Systems Institute, East-West Center, The Changing Structure of the World Refining Industry: Implications for the United States and Other Major Consuming Nations ("East-West Center Study") (Prepared for U.S. Department of Energy) (Feb. 1985), at vi, 58.

U.S. refiners also are well-positioned to draw quickly and effectively upon the 450.5 million barrels currently stored in the Strategic Petroleum Reserve ("SPR"). Nearly 50 percent of current U.S. operating capacity is located in Texas, Louisiana, Oklahoma and Mississippi. These refineries are readily accessible to the SPR inventory, which is stored in five sites in Louisiana and Texas. Considerable additional refining capacity also is easily accessible by virtue of the Capline Pipeline System. This pipeline, which is one of two principal lines available to transport petroleum stored in the SPR, extends as far as Chicago and permits shipment to a considerable number of refineries located in the Midwest. Thus, U.S. refiners would be in a position to respond to any increase in petroleum product demand in short order.

In addition, the U.S. is less vulnerable to supply interruptions than at any time in the past twenty years. Imported product's share of the U.S. market in 1985 was approximately 11 percent. [8/] Imported crude oil comprised only 26 percent of all refinery inputs in 1985. [9/] Those products and crude that are imported into this country come primarily from secure and reliable sources. According to Department of Energy statistics, 60 percent of product imports come from Western Hemisphere sources. In contrast, total product imports from all Arab OPEC nations amounted to only 9 percent of U.S. imports in 1984 and in January through November 1985. Our neighbors currently supply 72 percent of all residual fuel imports in the United States, 89 percent of all imported distillates and 43 percent of all gasoline imported into this country. Motor gasoline imports from Canada and Mexico have increased in relation to imports from other U.S. suppliers over the past several years. Canadian gasoline imports, for example, have increased by 75 percent, from 6 percent of gasoline imports in 1984 to

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[8/] U.S. Department of Enery, Energy Information Administration, Petroleum Supply Monthly, November 1985 (January 1986) (Preliminary figure).

[9/] Id.

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approximately 16 percent from January through November 1985. 10/ Western Hemisphere sources such as Mexico and Venezuela have proven reliable during past emergencies and crises and are secure from the war and turmoil that threatens the Middle East. In addition, transportation from sources such as Canada, Mexico and Venezuela is quick, and not subject to long delays.

Those relatively few product imports from other sources derive from a variety of suppliers, thus ensuring against excessive U.S. dependence on any one country or group of countries. Motor gasoline imports in 1984 and 1985, for example, were obtained from over 20 exporting countries, most of which are traditional suppliers located outside of the Persian Gulf. 11/ Not surprisingly, a study recently prepared by the Resource Systems Institute, East-West Center ("East-West Center Study") for the Department of Energy concluded that there is no threat to the national security at present from petroleum product imports. 12/

This situation is unlikely to change significantly in the foreseeable future. Our Western Hemisphere neighbors will continue to be a secure and stable source of imported petroleum products because of their considerable petroleum reserves 13/ and proximity to U.S. markets. In addition, there is no evidence that imports from suppliers outside of the Western Hemisphere (which because of their distance from the United States are more vulnerable to supply interruptions) will increase above their present low

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10/ U.S. Department of Energy, Energy Information Administration, Petroleum Supply Monthly, November 1985 (January 1986).

11 Hearing, supra, note 1, at 11 (Testimony of Danny J. Boggs). These suppliers include Romania, Italy, the Netherlands, The United Kingdom, Turkey, Brazil, West Germany, India, The People's Republic of China and over a dozen others.

12/ East-West Center Study, supra, note 7.

13/ Mexico, Canada and Venezuela all rank among the top 16 oil producing nations in official reserves. Mexico ranks fourth with 49 billion barrels , Venezuela ranks eighth with 28 billion barrels and Canada ranks sixteenth with 7 billion barrels of reserve. Oil and Gas Journal (Dec. 31, 1984).

levels. Imports from such other U.S. suppliers as Italy, the Netherlands, Indonesia, Romania, the Peoples' Republic of China and the Arab OPEC nations have remained at relatively insignificant levels for the past several years, and in some instances actually have declined. For example, imports of gasoline from Italy in 1982 through 1984 were considerably lower than import levels in 1981. Gasoline imports from Italy declined from 9.6 percent of total gasoline imports in 1981 to 3.6 percent, 4.0 percent and 6.5 percent, in 1982, 1983 and 1984 respectively. [14] Similarly, imports of refined products from Indonesia and the Peoples' Republic of China declined between 1984 and the first eleven months of 1985. [15] Imports of refined products from the Netherlands have remained constant at approximately 3.0 percent of total petroleum product imports during 1984 and 1985. Petroleum product imports from Romania have increased only marginally in the past several years from 2.29 percent of total petroleum product imports in 1984 to 2.64 percent in 1985. Similarly, imports of refined products from the Arab OPEC nations increased from only 9.19 percent of total product imports in 1984 to 9.22 percent during the first eleven months of 1985. [16]

Finally, there is no indication that the anticipated increases in refining capacity in the Middle East will constitute a threat to U.S. national security. According to the East-West Center Study, much of the new capacity in the Middle East was planned to meet domestic demand. 17/ More importantly, all indications are that product imports into the United States from the Middle East will remain at relatively low levels.

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[14] U.S. Department of Commerce, Bureau of Census.

[15] Product imports from Indonesia declined from 1.9 percent to 1.2 percent of total product imports. Imports from the Peoples' Republic of China declined from 1.5 percent to 1.2 percent of total product imports. U.S. Department of Energy, Energy Information Administration, Petroleum Supply Monthly, November 1985 (January 1986). The East-West Center study concluded that Indonesia, which has added significant petroleum production in the last several years, primarily will focus on meeting its long-term domestic needs. East-West Center Study, supra note 7, at ix, 140. Indeed, as of 1983, product exports comprised only 23 percent of Indonesia's total production.

Finally it appears likely that product imports from the Peoples' Republic of China will decline even further over the next several years. The Peoples' Republic of China is expected to divert a significant portion of its current light product exports to the United States to meet new anticipated demand in the Japanese market. See, note 24, infra.

[16] U.S. Department of Energy, Energy Information Administration, Petroleum Supply Annual 1984; Petroleum Supply Monthly, January-November 1985.

Saudi Arabia, for example, has opened several new refineries. One of these, the Yanbu refinery, was built as a joint venture with Mobil Corporation and already has begun to export to the United States. Imports from Saudi Arabia, however, consititute a minor portion of U.S. consumption and are likely to remain at their present low levels for the foreseeable future. Total product imports from Saudi Arabia were less than 2 percent of total imports from January through November 1985. Imports of motor gasoline from Saudi Arabia for the first eleven months of 1985 were less than 0.5 percent of total U.S. gasoline consumption. 18/ The East-West Center Study concluded that the present level of imports from Saudi Arabia cannot possibly be regarded as a national security threat. 19/

In addition, several factors militate against any significant increase in Saudi imports. First, the natural market for these products will be Western Europe and Japan, and not the United States. The sale of products at official prices (or less) in the U.S. market will result in fewer profits to Saudi refiners because of the high cost of transportation, thus discouraging significant exporting to the United States. 20/ Second, while the Saudis could conceivably increase product exports to the United States (in the event other world markets were closed), it appears likely that more profitable Western

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17/ East-West Center Study, supra, note 7, at viii.

18/ U.S. Department of Energy, Energy Information Administration, Petroleum Supply Monthly, November 1985 (January 1986).

19/ East-West Center Study, supra note 7, at viii. Indeed, a recent report prepared by E.B. Brossard, director of policy analysis for the Louisiana State University Center for Energy Studies concluded that Mobil Corporation's share of the Yanbu refinery's production will primarily be used to fill the gap left by the closing of Mobil's Wilhelmshaven, West Germany refinery. The Oil Daily, October 23, 1985, at 2.

20/ East-West Center Study, supra, note 7, at 161-162.

European and Japanese markets will exist for Saudi exports during the foreseeable future. The European Community permits product imports from Middle Eastern and North African producers to enter duty free and has continued not to impose any quantitative restrictions.[21] As a consequence, Western European countries have continued to be significant importers of petroleum products. Product imports into Western Europe increased from 3.65 million barrels per day in 1980 to 4.1 million barrels per day in 1983, or 46 percent of total world imports of petroleum products.[22]

The Western European members of the International Energy Agency ("IEA") have pledged to maintain a free market for petroleum product imports.[23] The Japanese also agreed to language in an IEA communcation that commits them to move expeditiously and without market distortion to increase imports of gasoline and other refined petroleum products.[24]

Finally, far from stepping up their petroleum product production, the Saudis in fact have taken steps to curtail their product output. Thus, Saudi refiners recently have postponed indefinitely plans for two new refineries, at Riyadh and Ras Tanora, that would have expanded production capacity by 450,000 barrels per day.[25]

There also is little reason to believe that imports from other Arab countries will increase in the foreseeable future. Kuwait has increased its production capacity significantly in the last several years. The East-West Center Study concluded, however, that Kuwait will sell almost exclusively in Western Europe through its established retail chains. Indeed, total petroleum product imports from Kuwait increased slightly from 0.59 percent of total petroleum imports in 1984 to only 0.92 percent in 1985. Both the United Arab Emirates and Algeria have decreased their exports of petroleum products to the United States. [26]

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[21] Hearing, *supra*, note 1, at 49-50.

[22] U.S. Department of Energy, Energy Information Administration, International Energy Annual 1981-1984.

[23] *The Wall Street Journal*, July 10, 1985.

[24] *The Wall Street Journal*, July 10, 1985.

[25] The United Arab Emirates ("UAE") and Qatar also have cancelled planned refineries. The UAE refinery would have had a production capacity of 25,000 barrels per day. The Qatar refinery, which has temporarily been cancelled, would have had a production capacity of 50,000 barrels per day.

In sum, there is little evidence of a national security threat at present or for the foreseeable future. The secure position that America enjoys is evidence that the present energy policy is well-suited to ensure against a threat to our national security. A neutral policy with respect to oil imports has encouraged and resulted in a diversity of suppliers, virtually all of whom are reliable and secure from disruption.

Diversification of America's sources of supply is preferable to overdevelopment of this country's domestic resource base. Hastening the depletion of U.S. reserves through an oil import tax would not promote U.S. energy independence, but in the long run could increase U.S. vulnerability. Equally important, a tax on oil imports could disrupt our secure sources of supply, ultimately undercutting the security that we have achieved in the last five years.

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26/ U.S. Department of Energy, Energy Information Administration, Petroleum Supply Annual 1984; Petroleum Supply Monthly, November 1985 (January 1986).

## AN OIL IMPORT TAX WOULD BE AN INEFFICIENT MEANS OF RAISING REVENUE

Particularly since the enactment of the Gramm-Rudman-Hollings Act, the idea of an oil import tax has been raised as a possible revenue raising device. Thus, in an attempt to meet the deficit reduction requirements of that act, some Members of Congress have suggested that a tax might provide an easy way to raise substantial revenue for the U.S. Treasury. Senator Hart, for example, recently indicated in a letter to President Reagan that an oil import tax is "one of the means available . . . to achieve the spending reductions required" by Gramm-Rudman-Hollings. According to Senator Hart, "circumstances have forced us beyond debating this fee strictly as energy policy." 1/

Congress should carefully consider the full implications of imposing an oil import tax before it acts. While a tax would raise some revenue for the U.S. Treasury, it would inefficiently reallocate our society's resources and cost consumers, industry, and the economy far more than the additional revenues it would generate. It is an extremely inefficient revenue raising device.

The ability of an oil import tax to raise revenue must be viewed in light of the fact that unless foreign producers absorb 100 percent of the tax, the levy will raise domestic oil prices to the after-tax price level of imported oil. The Congressional Budget Office has concluded that foreign producers could absorb up to one-third of the tax and might not absorb any portion. 2/ A $10.00 per barrel tax thus would probably

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1/ Letter to President Ronald Reagan from Senator Gary Hart, dated January 17, 1985.

2/ Congressional Budget Office, Oil Import Tariffs: Alternative Scenarios and Their Effects (Staff Working Paper, April 1982), at 2.

increase the national oil bill by around $45 billion annually.[3] In addition, increased oil prices would carry over to other energy sources, such as natural gas and coal. For example, natural gas prices would increase by as much as $25 billion each year.[4] The total increase in the national energy bill would equal at least $70 billion dollars.

A $10.00 per barrel tax, on the other hand, would produce approximately $18 billion of revenue the first year.[5] In addition, oil prices would result in some additional windfall profits tax and corporate and personal income tax revenues to the U.S. Treasury. There also would be some increased government revenue from federal oil leases and receipts from the Naval Petroleum Reserve.

In sum, the increase in our nation's energy bill from an oil import tax would be three to four times greater than the revenue generated by the tax. In addition, revenues to the U.S. Treasury from an oil import tax would be further offset by other consequences of an increase in domestic oil prices. Price increases would result in reduced income tax payments (because of decreased profits) from energy consumers and increased government outlays. These outlays would include expenditures tied to cost-of-living increases, such as unemployment, and entitlement programs including welfare, federal retirement and food stamps. They also would include discretionary outlays, such as military spending for gasoline and jet fuel. The result is that only 17 to 41 cents of each dollar of increase in the national energy bill would be captured as U.S. Treasury revenue.[6] Much of the additional consumer outlays for energy would go to the domestic oil companies and not to the government. A fundamental principle of taxation should be that all funds reallocated in the economy by a tax should go to the government, rather than private companies.

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[3] Consumer Federation of America, *The Energy, Economic and Tax Effects of Oil Import Fees* (October 1985), at iii.

[4] *Id.*

[5] Congressional Budget Office, *Oil Import Fees: Alternative Scenarios and Their Effects*, *supra* note 2, at i.

[6] Consumer Federation of America, *The Energy, Economic and Tax Effects of Oil Import Fees*, *supra* note 3, at vii.

The limited revenues raised by an oil import tax would be further offset by the negative effects of a tax on sectors of the U.S. economy other than the oil industry. These effects will result because, unlike other revenue raising measures, an oil import tax has the dual effect of raising revenue and causing price levels to rise.

Energy price increases necessarily raise producers' costs, particularly in energy-intensive industries such as agriculture, steel, the petrochemical industry, and others. According to economists at the Federal Reserve Bank of Dallas, an oil import tax would lead to decline in outputs, causing worker layoffs and decreased capital utilization. [7] The effects would spread to other sectors of the economy since energy-intensive industries, and consumers affected by energy price increases would spend less for other commodities. Indeed, the close relationship between energy price increases and economic recessions is demonstrated by the fact that each of the seven oil price increases since World War II has been followed by a recession. Only one recession has not been associated with an oil price increase. [8]

By raising energy prices, an oil import tax also would increase inflation; raise nominal interest rates (since, with increased prices, the economy will seek to finance more transactions); drive down investments; and reduce the real wealth of consumers (especially since producers will attempt whenever possible to transfer their increased costs forward to consumers). [9] In sum, a tax would produce results that typically flow from protectionism. Domestic energy industries will gain in the short run, but the gains to those companies and to the U.S. Treasury will be more than offset by losses in income and employment elsewhere in the economy.

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[7] Schmidt & Dunstan, Effects of Reducing the Deficit with an Oil Import Tariff, Economic Review (Federal Reserve Bank of Dallas, September 1985), at 15.

[8] Consumer Federation of America, The Energy, Economic and Tax Effects of Oil Import Fees, supra note 3, at 10.

[9] Schmidt & Dunstan, Effects of Reducing the Deficit with an Oil Import Tariff, supra note 7, at 18.

In addition to these costs, an oil import tax would worsen the U.S. trade deficit. In his remarks introducing his oil import tax proposal, Senator Hart suggested that a tax "would take a healty bit out of the merchandise trade deficit, which ballooned to $107 billion on current accounts last year." 10/ This conclusion misapprehends the effects of such a tax. An oil import tax would burden U.S. energy-intensive industries, such as agriculture, steel, paper, chemicals and petrochemicals with significantly increased energy costs not borne by foreign companies. As a consequence, a tax would provide a huge oil-cost windfall to U.S. producing and manufacturing entities' competitors, particularly in energy-intensive industries. Instead of reducing the U.S. trade deficit, an oil import tax would seriously erode the competitive position of U.S. firms and further increase the present trade imbalance. This consequence of an oil import tax should be of particular concern since it in effect bestows an energy subsidy to foreign manufacturers similar to the benefit condemned under the so-called natural resource subsidy legislation.

An oil import tax also would affect the U.S. trade deficit in another way. A tax would disrupt imports from a number of key U.S. trading partners, particularly Canada, Mexico and Venezuela. These, and other Western Hemisphere suppliers provide 60 percent of U.S. oil imports. Each of these countries also is a significant market for U.S. exports. These countries are already experiencing a drop in export revenues due to the decline in oil prices. A tax will exacerbate this situation. It will reduce the level of U.S. imports and lead to a further decline in those countries' export revenues. The countries also will be forced to absorb at least a portion of any import tax, and thus will

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10/ 131 Cong. Rec. S9262 (July 10, 1985).

lose additional revenues. The result will be a decline in their ability to buy U.S. exports, including agricultural and manufacturing goods.

An oil import tax also could cause U.S. trading partners to retaliate, causing even more damage to the U.S. economy. With a record $148.7 billion dollar trade deficit in 1985, any measure having as serious an impact on U.S. exports as an oil import tax would be ill-advised.

Finally, by raising U.S. oil prices to an artificial level, an oil import tax would deprive the U.S. economy of the important benefits of an oil price decline. Wharton Economic Forecasting Associates recently projected that if the average price of crude oil remained at around $18 per barrel, inflation in the United States, Western Europe, and Japan would fall 1.0 percent in 1986; U.S. economic growth would increase 0.3 percent; and employment would increase by 500,000 jobs. The Congressional Budget Office has estimated that a drop in crude prices to $20.00 per barrel will increase real industrial output by two percent, and shave consumer prices by 1.5 percent. 11/ Thus, the current price decline will strengthen the overall economy. In addition, other industrial economies should benefit, thereby potentially opening new export markets for U.S. goods.

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11/ Congressional Budget Office, Economic and Budgetary Consequences of an Oil Price Decline - A Preliminary Analysis (March 1983).

Senator **Hatfield** [presiding]. Thank you, Mr. Bolch.

I want to indicate that the committee is under a great deal of pressure for time. I have been called in to finish up the panels, to do so before the 2 o'clock hearing that I have to Chair in the Appropriations Committee. So, when we invite you to summarize, I can assure you that your full statement will not only be a part of the record, but your full statement becomes a very important document for us at the time when we review the hearings and prepare for markup.

But, as I see the schedule, as I have just arrived, for the next half hour that we have for the remaining period of this hearing, Mr. Jack Copeland, Mr. Lester Lamm, Mr. Thomas Donohue, Mr. Thomas Van Arsdall, and Dr. Mark Cooper are yet to be heard from. In consideration of especially Dr. Mark Cooper, who is the last one on the list, I would hope that the rest of you would be very considerate and seek to summarize as briefly as possible. Otherwise, we will just have to shake hands with Dr. Mark Cooper.

Dr. **Cooper**. Not the first time.

Senator **Hatfield**. Jack Copeland, chairman, Copeland, Wickersham, Wiley, & Co., New York. We would now be happy to hear from you, Mr. Copeland.

## STATEMENT OF JACK L. COPELAND, CHAIRMAN, COPELAND, WICKERSHAM, WILEY, & CO.

Mr. **Copeland**. Thank you, Mr. Chairman. Copeland, Wickersham, Wiley & Co. is an investment banking firm that is involved in every phase of the world petroleum industry. We have interests in every aspect of the industry, from marketing to production; we are involved extensively in the restructuring of problem loans for the Southwest and other national banks.

I think it is appropriate to look at what is happening in OPEC and, there is no question in our opinion, that the Saudis are trying to manipulate a price structure that would eliminate all high-cost production, eliminate competition on a long-term basis for the Mideast oil producers.

We have favored an import surcharge, even though it is not in our own best interests for the overall business. We are a little bit like being an undertaker during a plague.

The industry has not fully seen the impact of domestic oil price drops because production runs usually lag about 2 months from the time that the prices drop before the producers actually receive those checks. So they are still receiving December checks in today's marketplace. It is absolutely devastating what is happening in the marketplace today.

You have already seen over $9 billion of the top 15 oil companies reduce their capital spending for the year 1986. By putting that in perspective, at today's finding cost, that robs the United States of over 1 billion barrels of reserves alone, yet alone the multiplier effect of what it has to do on the entire economy.

In today's economic environment, in order to replace the reserves that we are burning, at whatever price that is, it is going to take around $26 to $27 for oil, and $3.25 to $3.50 for natural gas to replace our existing reserves, in order to have the industry with a suitable 12 percent after-tax rate of return. We are headed for a major natural gas shortage by the year 1988-89. The deliverability has been reduced from 1983, from over 4 trillion cubic feet, this year, to over 600 billion cubic feet and will be in an absolute shortage in 1988, by our projections.

In looking at the loan problems, just in the Southwest alone, the five largest banks in the State of Texas currently have around $10.5 billion to the oil industry; $6 billion of that is to the producing companies, the small independents, and $3 billion of it to the oil service sector.

The $6 billion was put on roughly at $25 per barrel. If you look at the economics in loan values, we estimate that at least at present prices, those values are roughly $3 billion, market value, and we think that of the $3 billion oil service loans, that there is no more than $1 billion of equity left in those loans.

So, you are looking at roughly from $4 to $6 billion write off in the five largest banks in the State of Texas, alone.

We are currently, as a firm, handling over $600 million worth of problem loans with two companies, and to date, there is only $100 million worth of equity; $500 million is going to have to be written off immediately in order for these companies to survive at all. That doesn't take into effect the cutback that has already developed.

If you look at a typical loan portfolio, and I will give you an example. One company that we represent had a loan value of $12.2 million at $25. At $10 a barrel, there was only $800,000 worth of loan value in that loan, and the future income of that—not even counting factor or interest expense—is only $3.6 million, roughly a $9 million loss just in that portfolio alone.

Development drilling was also cut back, where you would not have any ability to replace the relevant drilling below $15 a barrel, or $2 per thousand cubic feet in gas.

We have totally not seen the impact, as I have mentioned earlier. We think it is essential that the United States establish a long-term energy policy, and one of the formats would be establishment of variable import fee, in which the import fees would go to the Federal Government. However, all economic benefits associated with high domestic crude prices would be retained by the oil industry.

Depreciation lines for capital items associated for the drilling should be shortened in order to provide higher cash flows. Investment tax credits should be maintained. Earned drilling deductions should be established in order to encourage domestic drilling activity. Easing of restrictions of net operating loss carry forwards help producers and service companies access additional capital. Eliminate capital gains taxes on any equity that lenders exchange for long-term debt during the financial restructuring. Additional incentives should be looked at, as well.

And, I point out that the amount of money that is being lost on the economy—I am not an economist, but I have hard time finding where all that money is going to be totally lost on the economy of higher oil prices.

[The prepared statement of Mr. Copeland follows:]

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# TESTIMONY BEFORE THE SENATE COMMITTEE ON ENERGY AND NATURAL RESOURCES

by:

Jack L. Copeland
Chairman of the Board
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March 20, 1986

Copeland, Wickersham, Wiley & Co.

## TESTIMONY - SENATE COMMITTEE ON ENERGY AND NATURAL RESOURCES

### Introduction

Members of the Committee, I am Jack Copeland, Chairman of an investment banking and consulting firm called Copeland, Wickersham, Wiley & Co. Our business is solely related to the oil and gas industry. It is a pleasure for me to be here today to give you our experience and perspective on the issues being discussed before this committee.

During the course of my testimony, I intend to discuss the following topics:

1) Current status and economic conditions within the domestic oil and gas industry.

2) Outlook for the domestic oil and gas industry.

3) Current conditions within OPEC and outlook for OPEC.

4) Specific examples of the impact of the recent price declines upon reserve values, development drilling projects and production loan values. These examples will be used to illustrate the economic impact of oil price declines on the oil and gas industry, and equally important, on the banks.

Before getting into the various topics, it may be helpful to you to understand more about our firm in order for you to appreciate our perspective. Copeland, Wickersham, Wiley & Co. is a relatively young firm, approximately five years old. Our business is related solely to the oil and gas industry, i.e., exploration, production, refining, oil service, etc. We operate on a worldwide basis and have had dealings in the Middle East, Europe and the Far East beyond our emphasis on the United States. Our activities are varied but include the following: mergers, acquisitions, exploration and development drilling, reserve purchases and sales, evaluations, leverage buyouts, and workouts or financial restructurings. As a result of our activities, we deal with public and private oil companies, state oil companies, foreign governments, domestic and foreign banks and international financial institutions.

Our intent today is do to the following:

1) Explain the short term benefits and risks associated with the recent drop in oil prices. Our comments will also include bank loans to the energy industry.

2) Explain the reasons for the oil price decline.

3) Explain the longer-term problems that could develop if oil prices remain at their current level or decline even further.

4) Recommend actions that we believe are necessary both in the short and long terms.

## Summary

I have reviewed earlier testimony about the advisability of enacting an oil import surcharge and other suggested alternatives. Clearly, if the only issue of importance was the short-term economic benefits of lower oil prices, it would be very difficult to justify any form of import tax or other means to stabilize domestic crude and refined prices. However, I believe that this nation must not be short sighted but instead consider the longer-term objectives and goals that began as a result of the oil crisis in 1973 and were further reinforced in 1978-1981. To ignore the negative impact of low oil prices on the domestic oil and service industry will only result in longer-term problems and economic penalties.

Even before the recent collapse of oil prices to approximately $15 per barrel, the oil industry and inevitably the country, were already facing difficult problems. The recent pricing collapse brought on by OPEC will only result in bringing forward the relative timing of those problems and lengthening the duration of the problems. Specifically, the oil crisis of 1978-1981 caused a rapid jump in world oil prices which led to the following:

1) Excessive building of world oil inventories (see Table 1).

2) Distorted world oil production levels (see Table 2).

3) Significant overexpansion of the oil service industry.

4) Significant inflows of capital.

5) Significant increases in bank borrowing and other long-term liabilities.

6) Significant increase in domestic drilling activity (see Table 3).

Almost as rapidly as prices rose, world oil prices peaked in 1981 and began to drift downward. The end result was that capacity had been created within the oil and oil service industry based on the prospect of continued higher oil prices. In a declining price environment, the oil industry was not able to attract exploration or development capital.

If nothing else, the period of the 1970's thru 1985 gave us some important indications of the severe problems facing this nation on a longer-term basis. Despite the significant increase in drilling activity during this period, our proven reserves of crude oil and natural gas have continued to decline year after year (see Tables 4 and 5). We have not been able to replace our annual production of either oil or natural gas. Replacement of oil reserves has been especially disappointing. Much has been publicized about the natural gas bubble, but in reality excess deliverability is quickly disappearing (see Table 7). Excess deliverability should not be confused with a significant increase in overall proven reserves because our proven domestic natural gas reserves have also been declining on a consistent annual basis. In addition to the problems of overall reserve replacement, the nation is facing the problem of discovering smaller reserves located at deeper depths and in more hostile environments (see Table 8). Additionally, these factors have led to generally rising finding and development costs for both oil and gas reserves (see Tables 9, 10 and 11) The large, easy to find reserves have been discovered long ago. If the oil industry was unable to replace reserves during a period of high levels of drilling activity and higher oil prices, what will be the situation if oil prices are essentially reduced by 50%. (See Tables 12 and 13).

The impact on the nation from the recent oil price collapse has hardly been felt as of yet. The economic benefits have received much publicity, but we would like to point out some of the short-term problems also. The energy loan problems of the banks have been publicized in the past, but those problems resulted from oil prices dropping from over $30 per barrel to approximately $25 per barrel in 1985. This would apply both to production loans and the oil service industry. In our opinion, no one has focused in on the impact of energy loans based on $10, $15, or $20 per barrel oil. First of all, the average 1985 domestic rig count of 1980 rigs was based on an assumed oil price of approximately $27 per barrel. The recent decline in the number of rigs to approximately 1,250 is probably based on an assumed wellhead price of $20 per barrel. If the industry believes that wellhead prices will average $15 per barrel, then we would expect to see an average of 800 rigs or only 20% of the peak level achieved in 1981. The loan problems associated with the oil service industry have not begun to reflect $15 per barrel economic conditions. As for production loans, in our opinion, almost all production loans were established based on at least $25 per barrel oil prices. Consequently, if oil prices were to stabilize at $15, then there would be serious additional problems with the production loans. We have included specific examples showing the impact of declining oil prices on loan values, reserve levels, production levels, cash flows, and development projects (see Tables 14, 15 and 16).

Specifically, we have looked at the economic impact of various oil price levels on the energy loans of the "big five" banking organizations in Texas (see Table 17). As of March 1986 they had $10.7 billion outstanding in energy loans. Approximately $9.0 billion was associated with independent producers and oil service companies. It is estimated that about $6.0 billion was lent to independent producers in the form of production loans based on a $25 per barrel average price. Based on various average oil price assumptions we would estimate the following loan values compared to the $6 billion: 1) $20 per barrel - $4.7 billion; 2) $15 per barrel - $3.1 billion; 3) $10 per barrel - $1.4 billion. As noted above, if oil prices stabilized at $10 or $15 per barrel, we do not believe there would be any value in the $3.0 billion worth of loans to the oil service industry. Therefore, we would like to point out that in the short run, lower oil prices will not be a uniformly positive development. Increased publicity about energy loan problems may have a partially offsetting negative impact.

Going back to the longer-term and the oil industry, we believe that a number of actions need to be considered and, hopefully, implemented in order to achieve the economic and national security objectives begun in the 1970's. All of these policies would have the objective of setting an oil price which would allow the industry an acceptable rate of return and in addition give them the confidence that a stable domestic price would be maintained so that the industry could plan accordingly. Recent experience has shown the oil industry, investors and the banks that prices can change significantly based on OPEC and other actions. Stable and predictable oil prices would be established so that the domestic economy would not have to repeat the earlier economic shocks associated with periodic oil crises. Specifically, we would recommend the following actions:

1) Establishment of a variable oil import fee (crude and products) in which the import fees would go to the federal government. However, all of the economic benefits associated with higher domestic crude prices would be retained by the oil industry. This is necessary to provide the required capital for drilling and replacement. We estimate that the domestic oil industry needs an average price of $26.50 per barrel at the wellhead (see Tables 18 and 19).

2) Depreciation lives for capital items associated with drilling should be shortened in order to provide higher cash flows.

3) Investment tax credits should be maintained for the oil and gas industry.

4) "Earned drilling deductions" should be established in order to encourage domestic drilling activity. These "earned drilling deductions" would not be a tax preference item and would be computed at 15% of a producer's gross income from non-stripper oil and gas wells.

5) Easing of the restrictions on net operating loss carryforwards to help producers and service companies to access additional capital.

6) Eliminate capital gains taxes on any equity that lenders exchange for long-term debt during a financial restructuring.

7) Additional incentives need to be created to encourage high cost exploration and enhanced recovery projects.

## Current Conditions - Domestic Oil and Gas Industry

The period of the 1980's has been a time of downward adjustment for the domestic oil and gas industry. The Iranian revolution and the resulting spurt in world oil prices from $12.93 per barrel in 1978 to $18.73 per barrel in 1979 to a peak of $34.34 per barrel in 1981 caused massive disruptions and excesses within the oil and gas industry.

1) The domestic rig count increased from 1,658 rigs in 1976 to 2,177 rigs in 1979 to a peak level of 3,970 rigs in 1981.

2) Domestic seismic crew activity rose from 262 crews in 1976 to [illegible] in 1979 to a peak level of 681 in 1981.

3) The total number of wells drilled within the U.S. rose from 48,513 wells in 1978 to a high of 88,101 wells drilled in 1982.

4) Crude oil inventories rose from 309 million barrels in 1978 to 380 million barrels in 1980.

5) Numerous new oil service and exploration companies were formed.

6) Massive amounts of capital flowed into the industry from individuals, financial institutions, banks, foreign sources and corporations.

7) Onshore oil drilling costs escalated from $36.82 per foot in 1977 to $77.81 per foot in 1982.

The prosperity of 1979-1981 was brief and the industry has been trying to readjust ever since. The rapid rise in oil prices caused a peaking of domestic oil demand of 18.9 million barrels in 1978 and fairly consistent annual declines since then. Overall, domestic energy demand peaked in 1979 at 78.9 quadrillion BTU's with once again fairly consistent declines since the peak. In addition to the declining demand, the oil industry had overbuilt inventories and with declining prices, was forced to reduce inventories, further depressing refined product prices (see Tables 20 and 21). Declining world oil demand (see Table 22) caused OPEC to reduce its average prices in order to re-establish rising oil demand. This caused domestic wellhead prices to peak in 1981 at $31.77 per barrel and decline annually since then. In summary, the domestic oil and gas industry during 1981-1985 was adjusting to problems on all fronts:

1) Declining oil wellhead prices.

2) Excessive debt levels.

3) Declining oil demand.

4) Excessive crude and refined product inventories.

5) Significant reductions in new capital flowing into the industry.

For the oil service industry, besides the above factors, were the following problems:

1) Declining levels of drilling and exploration activity.

2) Significant overcapacity within the industry leading to low utilization and aggressive pricing. The end result was the absence of profitability in most sectors of the oil service industry.

By 1985, the domestic oil and gas industry was showing signs of having reached a base level from which to grow as evidenced by the following:

1) By May 1985, OPEC production was below its ceiling production level of 16 million barrels per day and world oil prices began to strengthen with spot prices exceeding official prices.

2) Domestic and foreign inventories were at a low level based on absolute and a days of supply basis.

3) Excess deliverability within the domestic natural gas industry was being drawn down and average wellhead prices had pretty much stabilized at $2.60-$2.65 per MCF.

4) Domestic rig activity in mid-1985 was showing signs of leveling out.

5) The banks seemed to have a grasp on their problem loans.

6) Refining margins were increasing, providing the major oil companies with higher cash flows.

7) Capital was beginning to flow into the industry by foreigners in the form of company acquisitions and reserve acquisitions. The weakening dollar was also beneficial for foreign investors.

8) Petroleum demand was showing signs, both domestically and internationally, of stabilizing.

Signs of crisis and fundamental deterioration began in October 1985, when OPEC production rose to 17.4 million barrel per day. To the oil markets, such production levels were a prelude to excess supplies and weaker prices. Continued excessive production (i.e., 18.1 million barrels per day) in December only reinforced the expectation of declining prices. Additionally, the December 1985 OPEC meeting and the subsequent statement of its intention to "secure and defend a fair share of the world oil market" provided speculators with additional reason to expect a significant price decline. OPEC would no longer restrict production in order to support oil prices. Such OPEC statements and overproduction caused a collapse of world oil prices and a concurrent collapse of domestic oil prices. Shown below are indicative prices and the significant declines that have occurred since November 1985:

| Time Period | West Texas Intermediate Spot ($/bbl) | West Texas Intermediate Posted ($/bbl) | Forties (N. Sea) Spot ($/bbl) | No. 2 Fuel Oil Spot (¢/gal) | Unleaded Gasoline Spot (¢/gal) |
|---|---|---|---|---|---|
| 1985 | | | | | |
| November | $30.81 | $27.60 | $29.71 | 86.98¢ | 80.83¢ |
| December | 27.42 | 27.60 | 26.55 | 81.00 | 71.57 |
| 1986 | | | | | |
| January | 22.94 | 24.00 | 22.23 | 66.80 | 67.71 |
| February | 15.44 | 21.10 | 16.85 | 53.05 | 45.76 |
| March 15 | 12.71 | 16.00 | 14.13 | 58.66 | 39.48 |

Falling oil prices have also had an immediate and dramatic effect upon domestic drilling activity. Shown below is the domestic rig count:

| Time Period | Hughes Tool-Domestic Rig Count | Percentage Change from Prior Year |
|---|---|---|
| 1985 | | |
| November | 1,912 | (27.3)% |
| December | 1,950 | (28.1) |
| 1986 | | |
| January | 1,810 | (26.2) |
| February | 1,444 | (34.0) |
| March 15 | 1,248 | (37.9) |

It is worth noting that the latest rig count of 1,248 rigs is the lowest level of domestic activity since August 27, 1973.

The reaction to the current industry environment has been predictable. Economists, financial forecasters and the stock market have viewed the oil price decline as being very positive based on expectations of lower inflation rates, higher disposable consumer incomes, increased economic activity, lower inflation rates, etc. The oil industry has begun to slash capital spending budgets, freeze current expenditures, reduce employment, etc.

## Outlook - Domestic Oil and Gas Industry

The euphoria of the recent oil price declines may shortly result in a more mixed situation. If oil prices remain at their current level, (i.e., $12.70 per barrel for West Texas Intermediate - spot market) there will be a number of adverse developments within the next few months, in our opinion:

1) Forced mergers or government acquisition of major southwest banks.

2) Significant rise in unemployment in energy-related states.

3) Significant loss of domestic oil production leading to a significant rise in foreign imports.

4) Complete loss of an exploration-oriented oil service industry.

Short-term, the most significant problem would be the domestic banking industry. Based on our experience with energy companies, banks and workout situations, we believe that a majority of the energy loans held by the domestic banks never envisioned the current oil price environment that we have today. In our opinion, most production loans were made assuming a $25 per barrel oil price and approximately $2.75 per MCF gas price. Few production loans would have sufficient collateral given today's spot prices to satisfy the loans. If prices continue at their present level, there is essentially no economic justification for an onshore drilling industry. We have included further in the testimony some actual examples of what the recent price declines mean for the following:

1) Production loan values.

2) Development drilling economics.

3) Value of an oil field.

4) Cash flow and associated economics of producing higher cost oil production.

The longer-term negative impact of today's oil prices will be much more significant and, in our opinion, completely offset the short-term economic benefits. We would add that such effects are exactly the goals being sought by some members of OPEC. In economic terms, we have a situation of predatory pricing which will lead to significant economic gains for OPEC. The domestic experience of the 1970's will serve as an indication of the longer-term future, however, the United States and the rest of the non-OPEC world will not have some of the benefits that we had in the late 1970's and early 1980's. Specifically, we would suggest the following as likely in the longer-term:

1) The normal decline in domestic oil production (5-10% per year) that probably would have begun around 1988 will accelerate and be brought forward because of uneconomic stripper production (14% of total domestic oil production), loss of other high cost oil production, fewer workovers, significant reduction in development drilling, absence of exploration drilling, etc.

2) The United States will not have in the immediate future another Prudhoe Bay to mask the overall decline that has occurred in Lower-48 oil production.

3) Rising oil demand growth (possibly 2-3% per year) coupled with declining domestic oil production should result in rising imports of possibly 1.5 million barrels per day or 29% higher than the average for 1985 (see Table 23). Based on $15 per barrel oil, our import bill would rise by approximately $8.8 billion per year.

4) In our opinion, non-OPEC oil production is close to peaking anyway in 1986 so rising domestic and international oil demand of 2-3% per year coupled with declining non-OPEC production should result in OPEC production rising by 2.0-2.5 million per day on a longer-term basis.

5) Once prices begin to rise again to a sufficient level to justify exploration and development drilling activity, there will be a significant lag in response time because of deteriorated equipment, loss of skilled manpower, damaged reservoirs, and reduced opportunities to find sizeable

reserves. The significant level of drilling activity that has occurred in the late 1970's and early 1980's has already shown us that new discoveries will be smaller and more costly.

6) OPEC will again regain the economic and political power that it had in the 1970's but unfortunately the non-OPEC countries will have less in the way of resources to counteract such OPEC influence having produced its significant discoveries in the 1976-1986 period.

## OPEC - Current Status

Ever since average OPEC prices peaked in 1981 at $34.34 per barrel, OPEC has been trying to re-establish its control over world oil markets. Despite efforts to reduce prices modestly and begrudgingly, OPEC has run into nothing but problems and adversity. The following are but a few examples:

1) As a result of the rapid rise in oil prices in 1979-1981, free world oil demand peaked in 1979 at an estimated 51.2 million barrels per day and declined fairly consistently to 44.6 million barrels per day in 1983.

2) Expectations of declining prices caused industry-wide oil inventories to decline from a peak of 5.4 billion barrels in 1980 to approximately 3.9 billion barrels in 1985.

3) Such deteriorating fundamentals caused average OPEC prices to decline as follows: 1981 - $34.34/barrel; 1982 - $32.93/barrel; 1983 - $29.05; 1984 - $28.54 1985 - $$27.07.

4) In addition to the above, rising non-OPEC supplies from 22.3 million barrels in 1980 to an estimated 28.0 million barrels in 1985 caused OPEC production to decline annually from its peak of 31.7 million barrels per day in 1977 to 17.2 million barrels per day in 1985 (16.1 million barrels per day of crude production and 1.1 million barrels per day of NGL production). (See Tables 24 and 25).

5) OPEC tried to stabilize or strengthen prices by periodically establishing production quotas for its member. Initially, a ceiling of 17.5 million barrels per day was set in April 1982. This quota was adjusted in April 1983 with the overall ceiling unaltered, but the individual country quotas were changed (see Tables 26 and 27). Finally, in October 1984, a production ceiling of 16.0 million barrels per day was established.

6) The end result has been a consistent and steady decline in total OPEC revenues from a peak of approximately $279 billion in 1980 to an estimated $133 billion in 1985 (see Table 28).

7) Beyond the frustrations of loss of revenues, OPEC's share of world oil production has declined significantly over the past few years despite little change in its relative reserve position as shown on the following page.

| Year | OPEC Production<br>As a % of Free World Production | <br>As a % of Total World Production | OPEC Reserves<br>As a % of Free World Reserves | <br>As a % of Total World Reserves |
|---|---|---|---|---|
| 1974 | 65% | 53% | 81% | 68% |
| 1979 | 61 | 48 | 79 | 68 |
| 1980 | 57 | 44 | 73 | 63 |
| 1984 | 43 | 32 | 76 | 67 |
| 1985 | 40 | 30 | N.A. | N.A. |

OPEC's problems have been both internal and external. The external problems are more simple and straightforward. As described earlier, exploration discoveries in the late 1960's (Alaska) and early 1970's (North Sea, Mexico, etc.) resulted in a steadily rising non-OPEC oil supply. These crude supplies replaced OPEC supplies causing OPEC to further reduce production levels. Many members of OPEC became increasingly annoyed that such non-OPEC production was enjoying the benefits of OPEC pricing action without having to sacrifice production. By early 1986, this conflict between OPEC and non-OPEC producers had risen to a major point of confrontation.

OPEC's internal disputes have been more complex but equally important. Saudi Arabia has always played a central role within OPEC given its significant reserve position and productive capacity. It has also often taken a different viewpoint (i.e., longer-term orientation) from many of the other OPEC members. This was first noted when the Saudis were reluctant to increase prices dramatically in 1979-1981. The Saudis were also eager to reduce prices in March 1983 because of their concern about longer-term oil demand and supplies. Despite these differences, we believe that Saudi Arabia has always felt a strong desire to hold OPEC together as an organization. The establishment of the OPEC production ceilings turned out to be a double edged sword. Temporarily, it brought discipline to OPEC and firmed oil prices. Saudi Arabia was initially deemed to be the "swing producer" within OPEC and over time its allocation of production was consistently reduced from 7.0 million barrels per day to 5.0 million barrels per day to 4.3 million barrels per day. Even with the Saudi reduction, many of the OPEC members regularly exceeded their quotas, forcing Saudi Arabia to reduce its production to 2.2 million barrels per day in June 1985. In our opinion, that action was the start of the current pricing collapse. Saudi Arabia decided that the only way to get sustained cooperation from fellow OPEC members concerning adherence to production ceilings was to dramatize the loss of revenues that could result from lower oil prices caused by excessive OPEC production. Given the apparent success of OPEC in 1985 in maintaining or even strenghtening oil prices, most OPEC members were anxious to increase production in late 1985 in anticipation of rising winter demand. The OPEC statements in December 1985 only acted to help the Saudis drive prices lower and show some of the other OPEC members the economic impact of increased production and sharply lower oil prices. Declining oil prices caused the oil industry once again to further reduce inventories and back away from OPEC production, causing OPEC production to decline from approximately 18.1 million barrels per day in December to an estimated maximum level of 16 million barrels per day at present. OPEC is now seeing the revenue impact of lower production and significantly reduced prices (see Table 29).

## OPEC - The Outlook

Presently, OPEC is meeting to discuss and possibly decide what to do about oil prices and production levels. Many, if not most, of the OPEC members are willing or even eager to reduce overall production levels to 12-14 million barrels or so in order to re-establish prices in the $22-$25 per barrel range. We believe that the market is already in balance with OPEC production at 16 million barrels per day presently. The major problem is the psychology of the marketplace and the greatly increased influence of the mercantile or futures markets. A unanimous decision by OPEC to reduce production to approximately 15 million barrels per day during the spring and summer of 1986 would put the world back in the same fundamental position that existed in 1985 when oil prices were firm and the oil and gas industry was beginning to return to a normal operating environment.

Unfortunately, we believe that Saudi Arabia will be inclined to keep the financial pressure on its fellow OPEC members, and more importantly, on the non-OPEC producers. Today's posted prices or even lower oil prices (i.e., spot prices) would have long-term effects on oil supplies and demand which would benefit OPEC and importantly Saudi Arabia on a longer-term basis. Rising world oil demand and declining non-OPEC production would relatively quickly re-establish OPEC and then the Saudis as the marginal supplier in a rising market. Saudi Arabia can determine the outcome of oil prices because of its productive capacity. If it decides that oil prices should return to $22-$25 per barrel it will. If, of the other hand, the Saudis want to go against OPEC, it can keep prices at their present level by using the press or increasing its production. Whatever happens, the domestic oil and gas industry and domestic banks will be significantly affected both in the short-term and long-run.

## Specific Examples

Shown later in table form are specific examples of oil and gas properties and the relative impact of oil and gas price changes. In these examples we have adjusted the economics based on oil prices ranging from $10-$25 per barrel and natural gas prices from $1.75-$2.75 per MCF. The examples are meant to illustrate the following:

1) Impact of changing oil prices on the cash flow generated by a producing oil field.

2) Impact of changing oil prices on the loan values of an oilfield.

3) Impact of changing oil prices on recoverable reserves and production.

4) Impact of changing natural gas prices on the economics of developing a natural gas field.

Table 16 shows economics for an oil producing operation which has already been developed. For each of various pricing scenarios are shown the future net income from the production, the present value at various discount rates, a loan value, which represents our experience on what banks will lend against a given cash flow projection and the reserves to be produced to the economic limit. Future net income for the example is defined as oil and gas revenues, less lease operating expenses and production taxes. Future net income is not reduced for corporate general and administrative costs necessary to provide accounting, legal and supervision functions. All figures are before federal income tax.

As can be seen from Table 16, a drop in crude price from $25 per barrel to $15 per barrel reduced future net income and loan value by half, and a drop in price below $15 per barrel begins to result in a reduction of producible reserves. The reason for this phenomenum is the fixed nature of well maintenance and lifing costs which do not decline in tandem with reduced oil revenues or declining production.

Table 14 shows the same economics as presented in Table 16 with the inclusion of general and administrative costs. Because of the fixed nature of overhead costs for a field relative to declining well productivity, the impact on field profitability is great. This example shows that when corporate costs are included, a drop from $25 to $15 represents a two-thirds reduction in future net income and a comparable reduction in loan value. Reserve life is also reduced as a result of reaching the economic production limit earlier in the field life. Thus, our conclusion from these two tables is that the current $15 per barrel crude scenario will reduce the available cash flow after expenses to the production industry by one-half to two thirds, and the ability to service debt accordingly.

Table 15 represents an example of an actual development drilling project in California at various pricing scenarios. Last fall, the crude from this particular region was selling for approximately $20 per barrel, and projected economics for the drilling of 24 wells at a cost of $12.0 million indicated a future net income of $49.5 million from the investment. This assumes no risk for dry holes, which are always a possibility when developing a field. On this basis, the economics are attractive and development drilling proceeded.

Currently, the crude is selling for $10 per barrel. At that price, future net income from the development would be sufficient only to return the initial capital outlay, and as can be seen from the discounted cash flows which are all less than the investment required, would not provide a rate of return sufficient to justify drilling. Accordingly, drilling has ceased. It should be pointed out that the investment costs in this example do not include the exploration costs which were expended to find this development opportunity.

Table 32 shows cash flows associated with a predominantly gas producing operation and corresponding loan values as per Tables 1 and 2. This example, which is based upon actual production in Oklahoma, shows that a 50 cent reduction in gas price from $2.50 to $2.00 (or a 20% reduction) reduces future net income and loan value by approximately 40%. As before, the reason is that production costs for well maintenance are typically a fixed cost and there is not a comparable reduction with gas price to offset the lower revenues.

Table 1

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## WORLD OIL INVENTORIES
(Amounts in Billions of Barrels)

| Category | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985E |
|---|---|---|---|---|---|---|---|---|---|
| Company Held | 5.1 | 4.8 | 5.1 | 5.2 | 4.8 | 4.5 | 4.1 | 4.0 | 3.9 |
| Government Held | 0.1 | 0.2 | 0.2 | 0.2 | 0.4 | 0.5 | 0.6 | 0.6 | 0.6 |
| Total | 5.2 | 5.0 | 5.3 | 5.4 | 5.2 | 5.0 | 4.7 | 4.6 | 4.5 |

| Category | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985E |
|---|---|---|---|---|---|---|---|---|---|
| Company Held | 105 | 95 | 100 | 106 | 101 | 98 | 90 | 99 | 86 |
| Government Held | 1 | 3 | 3 | 4 | 8 | 10 | 12 | 11 | 11 |
| Total | 106 | 98 | 103 | 110 | 109 | 108 | 102 | 99 | 97 |

Source: Petroleum Intelligence Weekly
Estimate: Copeland, Wickersham, Wiley & Co.

Table 2

Copeland, Wickersham, Wiley & Co.

WORLD OIL PRODUCTION
(Amounts in Thousands of Barrels Per Day)

| | 1974* | 1979* | 1980* | 1981 | 1982 | 1983 | 1984 | 1985 |
|---|---|---|---|---|---|---|---|---|
| OPEC - Crude | | | | | | | | |
| Saudi Arabia | 8,350 | 9,555 | 9,990 | 9,811 | 6,450 | 5,085 | 4,444 | 3,209 |
| Iran | 6,060 | 3,175 | 1,480 | 1,316 | 1,964 | 2,426 | 2,187 | 2,192 |
| Iraq | 1,970 | 3,475 | 2,645 | 897 | 923 | 1,005 | 1,203 | 1,433 |
| Kuwait | 2,330 | 2,270 | 1,430 | 1,125 | 828 | 1,077 | 912 | 846 |
| U.A.E. - Abu Dhabi | 1,410 | 1,465 | 1,345 | 1,132 | 849 | 775 | 758 | 788 |
| U.A.E. - Dubai | 240 | 355 | 350 | 359 | 358 | 334 | 342 | 351 |
| U.A.E. - Sharjah | 3 | 13 | 11 | 10 | 7 | 38 | 55 | 64 |
| Qatar | 520 | 510 | 460 | 405 | 328 | 295 | 399 | 306 |
| Neutral Zone | 540 | 570 | 545 | - | - | - | 410 | 357 |
| Subtotal | 21,423 | 21,388 | 18,256 | 15,055 | 11,706 | 11,035 | 10,708 | 9,546 |
| Other OPEC | | | | | | | | |
| Venezuela | 3,065 | 2,425 | 2,235 | 2,101 | 1,891 | 1,790 | 1,811 | 1,670 |
| Nigeria | 2,260 | 2,300 | 2,055 | 1,445 | 1,295 | 1,241 | 1,389 | 1,472 |
| Libya | 1,520 | 2,090 | 1,830 | 1,117 | 1,150 | 1,076 | 1,071 | 1,056 |
| Indonesia | 1,375 | 1,590 | 1,575 | 1,604 | 1,339 | 1,385 | 1,468 | 1,256 |
| Algeria | 1,010 | 1,255 | 1,120 | 808 | 702 | 675 | 638 | 631 |
| Gabon | 200 | 205 | 175 | 151 | 154 | 157 | 153 | 153 |
| Ecuador | 175 | 215 | 205 | 211 | 209 | 236 | 253 | 277 |
| Total OPEC-Crude | 31,028 | 31,468 | 27,451 | 22,491 | 18,445 | 17,595 | 17,491 | 16,063 |
| -NGL | 0 | 0 | 0 | 1,039 | 892 | 964 | 1,045 | 1,039 |
| | 31,028 | 31,468 | 27,451 | 23,530 | 19,337 | 18,559 | 18,536 | 17,102 |
| Non-OPEC Crude | | | | | | | | |
| United States | 10,485 | 10,135 | 10,170 | 8,560 | 8,670 | 8,674 | 8,728 | 8,932 |
| North Sea | 35 | 1,985 | 2,175 | 2,341 | 2,673 | 2,944 | 3,285 | 3,394 |
| Mexico | 640 | 1,630 | 2,155 | 2,313 | 2,749 | 2,691 | 2,764 | 2,725 |
| Others | 5,422 | 6,147 | 6,069 | 5,636 | 5,809 | 6,364 | 6,920 | 7,530 |
| Subtotal | 16,582 | 19,897 | 20,569 | 18,850 | 19,901 | 20,673 | 21,698 | 22,582 |
| Non-OPEC - NGL | - | - | - | 2,300 | 2,278 | 2,413 | 2,450 | 2,580 |
| Total Non-OPEC | 16,582 | 19,897 | 20,569 | 21,150 | 22,179 | 23,086 | 24,148 | 25,162 |
| Total Free World | 47,610 | 51,365 | 48,020 | 44,680 | 41,516 | 41,645 | 42,683 | 42,263 |
| Others | | | | | | | | |
| Soviet Union | 9,290 | 11,870 | 12,215 | 11,800 | 11,921 | 11,875 | 11,947 | 11,329 |
| China | 1,320 | 2,130 | 2,125 | 2,018 | 2,023 | 2,093 | 2,171 | 2,475 |
| Others | 400 | 410 | 385 | 413 | 410 | 420 | 425 | 440 |
| Subtotal | 11,010 | 14,410 | 14,725 | 14,231 | 14,354 | 14,388 | 14,543 | 14,244 |
| Total World | 58,620 | 65,775 | 62,745 | 58,910 | 55,870 | 56,033 | 57,226 | 56,507 |

* During 1974, 1979 and 1980, NGL's are included in the crude oil figures.
Source: Petroleum Intelligence Weekly, B.P. Statistical Review

Table 3

Copeland, Wickersham, Wiley & Co.

## DOMESTIC RIG AND SERVICE ACTIVITY COMPARED TO AVERAGE WELLHEAD PRICES

| Year | Average U.S. Crude Wellhead Price ($/bbl) | Average U.S. Natural Gas Wellhead Price ($/MCF) | Average Rig Count U.S. | Average Seismic Crew U.S. - Months |
|---|---|---|---|---|
| 1972 | $3.39 | $0.19 | 1,107 | 251 |
| 1973 | 3.89 | 0.22 | 1,194 | 250 |
| 1974 | 6.74 | 0.30 | 1,473 | 305 |
| 1975 | 7.56 | 0.45 | 1,659 | 285 |
| 1976 | 8.19 | 0.58 | 1,658 | 262 |
| 1977 | 8.57 | 0.79 | 2,001 | 308 |
| 1978 | 9.00 | 0.91 | 2,259 | 352 |
| 1979 | 12.64 | 1.18 | 2,177 | 400 |
| 1980 | 21.59 | 1.59 | 2,910 | 530 |
| 1981 | 31.77 | 1.98 | 3,970 | 681 |
| 1982 | 28.52 | 2.46 | 3,105 | 589 |
| 1983 | 26.19 | 2.59 | 2,232 | 473 |
| 1984 | 25.88 | 2.66 | 2,428 | 494 |
| 1985 | 23.88 | 2.63 | 1,980 | 367 |

### Percentage Change

| Year | Average U.S. Crude Wellhead Price ($/bbl) | Average U.S. Natural Gas Wellhead Price ($/MCF) | Average Rig Count U.S. | Average Seismic Crew U.S. - Months |
|---|---|---|---|---|
| 1973 | 14.7 % | 15.8 % | 7.9 % | ( 0.4)% |
| 1974 | 73.3 | 36.4 | 23.4 | 22.0 |
| 1975 | 12.2 | 50.0 | 12.6 | ( 6.6) |
| 1976 | 8.3 | 28.9 | - | ( 8.1) |
| 1977 | 4.6 | 36.2 | 20.7 | 17.6 |
| 1978 | 5.0 | 15.2 | 12.9 | 14.3 |
| 1979 | 40.4 | 29.7 | ( 3.6) | 13.6 |
| 1980 | 70.8 | 34.7 | 33.7 | 32.5 |
| 1981 | 47.1 | 24.5 | 36.4 | 28.5 |
| 1982 | (10.2) | 24.2 | (21.8) | (13.5) |
| 1983 | ( 8.2) | 5.3 | (28.1) | (19.7) |
| 1984 | ( 1.2) | 2.7 | 8.8 | 4.4 |
| 1985 | ( 7.7) | ( 1.1) | (18.5) | (25.7) |

Source: Hughes Tool Co., Society of Exploration Geophysicists, Dept. of Energy, Oil and Gas Journal

Table 4

## OIL RESERVE/PRODUCTION OVERVIEW
## (Oil in Million Barrels of 42 U.S. Gallons)

| | Proven Oil Reserves (Year-end) | Revisions and Extensions | Total New Discoveries | Total of Discoveries Revisions & Extensions | Total New Discoveries As a % of Total New Reserve Additions | Production | Total Reserve Additions As a % of Production | New Discoveries As a % of Production | Oil Well Drilling Profile | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Onshore | | Offshore | |
| | | | | | | | | | Average Depth/ Well(Ft.) | Average Cost/ Foot($) | Average Depth/ Well(Ft.) | Average Cost/ Foot($) |
| 1960 | 31,613 | 2,112 | 254 | 2,366 | 10.7% | 2,473 | 95.7% | 10.3% | 3,878 | $11.26 | 9,518 | $ 34.27 |
| 1961 | 31,759 | 2,296 | 361 | 2,657 | 13.6 | 2,508 | 105.9 | 14.4 | 3,821 | 12.18 | 9,487 | 36.27 |
| 1962 | 31,389 | 1,800 | 380 | 2,180 | 17.4 | 2,553 | 85.4 | 14.9 | 4,146 | 12.52 | 9,725 | 35.78 |
| 1963 | 30,970 | 1,824 | 350 | 2,174 | 16.1 | 2,613 | 83.2 | 13.4 | 3,812 | 12.15 | 9,918 | 35.48 |
| 1964 | 30,991 | 2,318 | 347 | 2,665 | 13.0 | 2,645 | 100.8 | 13.1 | 3,719 | 11.77 | 9,669 | 35.64 |
| 1965 | 31,352 | 2,576 | 472 | 3,048 | 15.5 | 2,699 | 112.9 | 17.5 | 4,062 | 11.71 | 10,103 | 39.23 |
| 1966 | 31,452 | 2,653 | 310 | 2,963 | 10.5 | 2,863 | 103.5 | 10.8 | 3,925 | 12.40 | 10,017 | 44.12 |
| 1967 | 31,377 | 2,617 | 345 | 2,962 | 11.6 | 3,047 | 97.2 | 11.3 | 3,781 | 12.89 | 8,469 | 48.46 |
| 1968 | 30,707 | 2,097 | 357 | 2,454 | 14.5 | 3,161 | 77.6 | 11.3 | 3,984 | 13.49 | 8,755 | 50.87 |
| 1969 | 29,632 | 1,873 | 247 | 2,120 | 11.7 | 3,188 | 66.5 | 7.7 | 4,276 | 14.99 | 8,903 | 61.61 |
| 1970 | 39,001 | 2,720 | 9,969 | 12,689 | 78.6 | 3,328 | 381.3 | 299.5 | 4,306 | 15.59 | 8,786 | 60.14 |
| 1971 | 38,063 | 2,161 | 156 | 2,317 | 6.7 | 3,298 | 70.3 | 4.7 | 4,116 | 16.01 | 9,427 | 56.08 |
| 1972 | 36,339 | 1,279 | 278 | 1,557 | 17.9 | 3,274 | 47.6 | 8.5 | 4,330 | 17.56 | 9,860 | 65.08 |
| 1973 | 35,300 | 1,942 | 204 | 2,146 | 9.5 | 3,361 | 63.9 | 6.1 | 4,462 | 19.65 | 9,075 | 67.73 |
| 1974 | 34,250 | 1,680 | 314 | 1,994 | 15.7 | 3,203 | 62.3 | 9.8 | 3,874 | 25.59 | 8,312 | 80.65 |
| 1975 | 32,682 | 1,017 | 301 | 1,318 | 22.8 | 3,057 | 43.1 | 9.8 | 3,979 | 31.49 | 8,574 | 104.08 |
| 1976 | 30,942 | 955 | 131 | 1,086 | 12.1 | 2,976 | 36.5 | 4.4 | 3,953 | 33.93 | 9,531 | 122.99 |
| 1977 | 29,486 | 882 | 298 | 1,180 | 25.3 | 3,009 | 39.2 | 9.9 | 4,052 | 36.82 | 8,924 | 162.90 |
| 1978 | 27,804 | 1,834 | 383 | 2,217 | 17.3 | 3,178 | 69.8 | 12.1 | 4,093 | 44.10 | 9,445 | 192.91 |
| 1979 | 27,051 | 861 | 212 | 1,073 | 19.8 | 3,121 | 34.4 | 6.8 | 4,076 | 51.73 | 9,283 | 214.46 |
| 1980 | 29,805 | 2,461 | 290 | 2,751 | 10.5 | 3,147 | 87.4 | 9.2 | 4,045 | 60.62 | 8,952 | 297.52 |
| 1981 | 29,426 | 2,021 | 411 | 2,432 | 16.9 | 3,129 | 77.7 | 13.1 | 4,138 | 75.38 | 8,355 | 309.85 |
| 1982 | 27,858 | 1,068 | 397 | 1,465 | 27.1 | 3,157 | 46.4 | 12.6 | 3,958 | 77.81 | 8,784 | 366.21 |
| 1983 | 27,735 | 2,140 | 295 | 2,435 | 12.1 | 3,171 | 76.8 | 9.3 | 3,831 | 63.27 | 9,395 | 347.65 |
| 1984 | 28,446 | 3,189 | 400 | 3,589 | 11.1 | 3,250 | 110.4 | 12.3 | 3,888 | 59.42 | 9,016 | 301.81 |

Source: API

Table 5

## NATURAL GAS *a

## NATURAL GAS AND NATURAL GAS LIQUIDS
## PROVEN RESERVES PROFILE

| Year | Net Adjustments | Revision Increases | Revision Decreases | Extensions to Old Reservoirs | New Field Discoveries | New Reservoir Discoveries in Old Fields | Total Discoveries (4+5+6) | Production | Proven Reserves | Net Change | Total Discoveries As a % of Production | Indicated Years Supply |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1977 | ( 20) | 13,691 | 15,296 | 8,129 | 3,173 | 3,301 | 14,603 | 18,843 | 207,413 | (5,865) | 77.5% | 11.0 |
| 1978 | 2,429 | 14,969 | 15,994 | 9,582 | 3,860 | 4,579 | 18,021 | 18,805 | 208,033 | 620 | 95.8 | 11.1 |
| 1979 | (2,264) | 16,410 | 16,629 | 8,950 | 3,188 | 2,566 | 14,704 | 19,257 | 200,977 | (7,036) | 76.4 | 10.4 |
| 1980 | 1,201 | 16,972 | 15,923 | 9,357 | 2,539 | 2,577 | 14,743 | 18,699 | 199,021 | (1,976) | 77.4 | 10.6 |
| 1981 | 1,627 | 16,412 | 13,813 | 10,491 | 3,731 | 2,998 | 17,220 | 18,737 | 201,730 | 2,709 | 91.9 | 10.8 |
| 1982 | 2,378 | 15,795 | 19,340 | 8,349 | 2,687 | 3,419 | 14,455 | 17,506 | 201,512 | ( 218) | 82.6 | 11.5 |
| 1983 | 3,090 | 17,602 | 17,617 | 6,909 | 1,574 | 2,965 | 11,448 | 15,788 | 200,247 | (1,265) | 72.5 | 12.7 |
| 1984 | (2,241) | 17,841 | 14,712 | 8,299 | 2,536 | 2,686 | 13,521 | 17,193 | 197,463 | (2,784) | 78.6 | 11.5 |
| 1977-84 Avg. | 775 | 16,712 | 16,166 | 8,750 | 2,911 | 3,136 | 14,805 | 18,104 | 202,052 | (1,977) | 81.8% | 11.2 |

*a Billion cubic feet, dry, 14.73 psia, 60°F.

Source: Energy Information Administration

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Table 6

## LOWER-48 DELIVERABILITY ANALYSIS
(Amounts in Trillions of Cubic Feet)

| Category of Production | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984E | 1985E | 1986E | 1987E | 1988E | 1989E | 1990E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Associated Gas Production | 3.62 | 3.87 | 3.80 | 4.25 | 4.19 | 4.34 | 4.37 | 4.30 | 4.25 | 4.13 | 4.08 | 3.93 | 3.85 | 3.73 |
| Non-Associated Gas Production Phase-One Deliverability | 4.71 | 5.80 | 6.70 | 6.51 | 6.92 | 6.33 | 6.89 | 5.56 | 5.37 | 5.09 | 5.33 | 5.69 | 5.99 | 6.28 |
| Non-Associated Gas Production Phase-Two Deliverability | 13.01 | 11.46 | 10.99 | 10.78 | 10.02 | 11.35 | 10.32 | 11.77 | 11.59 | 11.35 | 10.83 | 10.29 | 9.84 | 9.49 |
| Total Lower-48 Deliverability | 21.34 | 21.13 | 21.49 | 21.54 | 21.13 | 22.02 | 21.58 | 21.63 | 21.21 | 20.57 | 20.24 | 19.91 | 19.68 | 19.50 |
| Actual Lower-48 Gas Production | 20.72 | 20.71 | 21.15 | 20.98 | 20.64 | 19.13 | 17.43 | 19.50 | 20.29 | 19.97 | 19.84 | 20.19 | 20.19 | 20.34 |
| | | | | | | | | | | | | | | |
| Excess Deliverability | 0.62 | 0.43 | 0.34 | 0.56 | 0.49 | 2.89 | 4.15 | 2.13 | 0.92 | 0.60 | 0.40 | (0.28) | (0.51) | (0.84) |
| 3-Year Moving Average | - | - | 0.46 | 0.44 | 0.46 | 1.31 | 2.51 | 3.06 | 2.40 | 1.22 | 0.64 | 0.24 | (0.13) | (0.54) |
| Percent of Capacity Shut-in | 2.94 | 2.04 | 1.64 | 2.60 | 2.30 | 13.14 | 19.24 | 9.84 | 4.34* | 2.94* | 2.04* | - | - | - |
| | | | | | | | | | | | | | | |
| Level of Imports and Supplemental Supplies | 0.96 | 0.91 | 1.20 | 1.09 | 1.02 | 1.03 | 1.05 | 1.00 | 1.10 | 1.14 | 1.12 | 1.10 | 1.23 | 1.25 |
| | | | | | | | | | | | | | | |
| Average Wellhead Price | $0.79 | $0.91 | $1.18 | $1.59 | $1.98 | $2.46 | $2.62 | $2.57 | $2.68 | $2.79 | $2.90 | $3.01 | $3.16 | $3.27 |
| | | | | | | | | | | | | | | |
| Deliverability Profile | | | | | | | | | | | | | | |
| Producing Gas and Gas Condensate Wells | 148,018 | 157,484 | 169,891 | 182,004 | 198,839 | 210,753 | 221,952 | 228,500 | 235,000 | 247,000 | 259,750 | 273,100 | 287,100 | 300,000 |
| Number of Gas Fields | 11,565 | 12,419 | 13,988 | 14,706 | 14,595 | 15,071 | 15,547 | 16,023 | 16,500 | 17,012 | 17,542 | 18,087 | 18,647 | 19,217 |
| Reserves Per Gas Field(BCF) | 14.60 | 13.70 | 12.60 | 11.80 | 11.60 | 11.22 | 10.84 | 10.46 | 10.07 | 9.59 | 9.04 | 8.55 | 8.08 | 7.67 |
| Production Per Gas Field(BCF) | 1.60 | 1.50 | 1.40 | 1.30 | 1.29 | 1.23 | 1.26 | 1.28 | 1.31 | 1.27 | 1.24 | 1.19 | 1.15 | 1.11 |
| Reserves Per Gas Well(BCF) | 1.41 | 1.37 | 1.15 | 1.13 | 1.05 | 0.97 | 0.88 | 0.80 | 0.71 | 0.66 | 0.61 | 0.57 | 0.53 | 0.49 |
| Production Per Gas Well(MMCF) | 117.70 | 110.50 | 106.10 | 96.90 | 87.20 | 88.43 | 89.67 | 90.90 | 92.13 | 87.49 | 84.04 | 78.88 | 74.71 | 71.17 |
| Reserves to Production Ratio(R/P) | 8.98 | 9.01 | 8.58 | 8.53 | 9.05 | 8.63 | 9.41 | 8.97 | 7.67 | 7.55 | 7.26 | 7.17 | 7.03 | 6.90 |
| Wells Per Field | 12.80 | 12.68 | 12.14 | 12.37 | 13.62 | 13.98 | 14.28 | 14.26 | 14.24 | 14.52 | 14.81 | 15.10 | 15.40 | 15.61 |

**Comments**
This table suggests the need for even more new reserve additions than projected. Should considerable new reserve additions not occur, then (for a brief duration) producing reserves could be delivered at accelerated rates. In practice, these Lower-48 deliverability shortfalls (should they occur) could also be overcome through increased imports from Canada; which would put imports at 1.38 TCF in 1988, 1.74 TCF in 1989 and 2.09 TCF in 1990.

**Sources**
For all tables, the source of historical information is: Energy Information Administration, American Gas Association, American Petroleum Institute and CWN. All projections are CWN.

*** Perspective**
Since an operating cushion is required, CWN feels that a 4.5 percent reserve margin should be included in the excess deliverability calculation. After such a calculation, excess deliverability dissipates in 1985.

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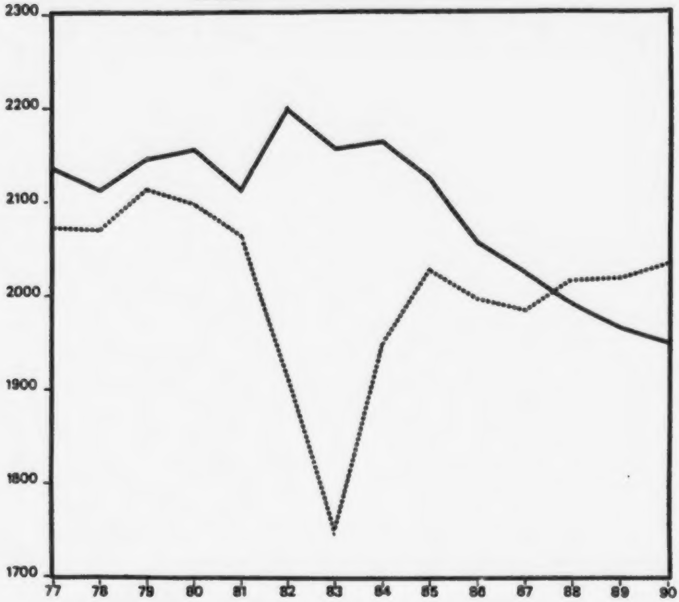
Table 7

## LOWER-48 EXCESS DELIVERABILITY



·············· Actual and Assumed Lower-48 Wet Gas Production Required.

———— Lower-48 Sustainable Deliverability.

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Table 8

Copeland, Wickersham, Wiley & Co.

## NATURAL GAS
## PRICE REQUIRED TO SUSTAIN ACCELERATED RESERVE GROWTH

| Year | Reserves Per Gas Field (BCF) | Production Per Gas Field (BCF) | Reserves Per Gas Well (BCF) | Production Per Gas Well (MMCF) | Average Wellhead Price ($/MCF) | Incentive Price ($/MCF) |
|---|---|---|---|---|---|---|
| 1977 | 14.6 | 1.6 | 1.4 | 117.7 | $0.79 | $ |
| 1978 | 13.7 | 1.5 | 1.3 | 110.5 | 0.91 | |
| 1979 | 12.6 | 1.4 | 1.2 | 106.1 | 1.18 | |
| 1980 | 11.8 | 1.3 | 1.1 | 96.9 | 1.59 | |
| 1981 | 11.6 | 1.2 | 1.1 | 87.2 | 1.98 | |
| 1982 | 11.2 | 1.2 | 1.0 | 88.4 | 2.46 | |
| 1983 | 10.8 | 1.3 | 0.9 | 89.7 | 2.62 | |
| 1984 | 10.5 | 1.3 | 0.8 | 90.9 | 2.57 | |
| 1985E | 10.1 | 1.3 | 0.7 | 92.1 | 2.68 | |
| 1986E | 9.6 | 1.3 | 0.7 | 87.5 | 2.79 | 3.24-3.80 |
| 1987E | 9.0 | 1.2 | 0.6 | 84.0 | 2.90 | 3.37-4.00 |
| 1988E | 8.6 | 1.2 | 0.6 | 79.0 | 3.01 | 3.45-4.10 |
| 1989E | 8.1 | 1.2 | 0.5 | 74.7 | 3.16 | 3.74-4.35 |
| 1990E | 7.7 | 1.1 | 0.5 | 71.2 | 3.27 | 4.08-4.75 |

Table 2

## ESTIMATED REPLACEMENT EXPENSES FOR ONE DOMESTIC BARREL OF OIL EQUIVALENT [1]

| | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Oil Exploration Expenditures:** [2] | | | | | | | | | | | | |
| Drilling and Equipping Wells | $ 439 | $ 718 | $ 1,131 | $ 1,184 | $ 1,987 | $ 2,013 | $ 2,677 | $ 4,384 | $ 7,844 | $ 8,039 | $ 4,643 | $ 4,048 |
| Acquiring Undeveloped Acreage | 1,776 | 2,487 | 808 | 1,118 | 1,290 | 1,443 | 3,510 | 3,950 | 5,594 | 4,082 | 4,000 | 3,750 |
| Land Dept., Leasing and Scouting | 39 | 48 | 77 | 83 | 83 | 83 | 112 | 148 | 180 | 229 | 213 | 200 |
| Geological and Geophysical | 300 | 284 | 317 | 348 | 417 | 515 | 699 | 936 | 1,412 | 1,490 | 1,250 | 1,300 |
| Lease Rental | 91 | 107 | 119 | 134 | 140 | 171 | 187 | 287 | 390 | 398 | 384 | 378 |
| Test Hole Contributions | 7 | 8 | 9 | 11 | 17 | 13 | 13 | 14 | 17 | 14 | 13 | 9 |
| Other, Incl. Direct Overhead | 93 | 94 | 131 | 125 | 183 | 187 | 288 | 379 | 580 | 996 | 980 | 490 |
| General and Administrative | 182 | 148 | 171 | 202 | 207 | 245 | 331 | 447 | 634 | 711 | 625 | 640 |
| Total Oil Exploration | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| **Oil Development Expenditures:** [2] | | | | | | | | | | | | |
| Drilling and Equipping Wells | $ 1,139 | $ 1,690 | $ 2,430 | $ 2,795 | $ 3,410 | $ 4,180 | $ 4,753 | $ 7,051 | $10,396 | $13,816 | $ 9,873 | $11,999 |
| Lease Equipment | 343 | 484 | 900 | 993 | 960 | 1,305 | 1,288 | 2,144 | 2,956 | 3,081 | 3,000 | 2,800 |
| Acquiring Producing Acreage | 139 | 284 | 187 | 379 | 139 | 225 | 2,756 | 1,537 | 487 | 912 | 1,160 | 1,300 |
| Improved Recovery Programs | 335 | 594 | 483 | 359 | 438 | 687 | 342 | 800 | 1,239 | 1,633 | 1,785 | 1,911 |
| Other, Incl. Direct Overhead | - | - | - | 490 | 135 | 334 | 373 | 357 | 491 | 370 | 350 | 335 |
| General and Administrative | 83 | 113 | 168 | 178 | 188 | 189 | 381 | 373 | 658 | 479 | 580 | 550 |
| Total Oil Development | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| **Oil Production Expenditures:** [2] | | | | | | | | | | | | |
| Direct Operating Expenses | $ 2,075 | $ 2,997 | $ 3,160 | $ 3,981 | $ 4,117 | $ 4,737 | $ 5,566 | $ 7,101 | $10,139 | $10,659 | $11,176 | $10,499 |
| Taxes, Excl. Income Tax | 483 | 787 | 873 | 949 | 1,080 | 1,180 | 1,376 | 3,283 | 3,330 | 3,303 | 3,000 | 2,750 |
| General and Administrative | 249 | 381 | 380 | 438 | 493 | 535 | 591 | 858 | 1,123 | 1,334 | 1,580 | 1,350 |
| Other Indirect Expenses | 37 | 128 | 179 | 183 | 218 | 187 | 270 | 3,038 | 10,503 | 12,607 | 10,250 | 9,800 |
| Total Oil Production | $ 2,884 | $ 3,791 | $ 4,590 | $ 5,138 | $ 5,838 | $ 6,659 | $ 7,781 | $16,187 | $23,074 | $28,093 | $26,034 | $24,439 |
| Total Oil Expenditures | $ 7,988 | $11,063 | $11,937 | $13,605 | $15,086 | $18,116 | $25,481 | $38,944 | $47,360 | $63,691 | $54,122 | $54,231 |

| | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reserve Allocation** [3] | | | | | | | | | | | | |
| Crude Oil | 2,145 | 1,993 | 1,318 | 1,088 | 1,140 | 2,980 | 1,410 | 2,970 | 2,570 | 1,383 | 2,897 | 3,748 |
| Associated Dry Gas Reserves (BOE) | 473 | 274 | 19 | 16 | 204 | 257 | 370 | 950 | 440 | 802 | 438 | 295 |
| Associated Natural Gas Liquids | 389 | 163 | 200 | 440 | 69 | 97 | 237 | 380 | 400 | 193 | 632 | 331 |
| Total "Oil Economic Benefit" | 3,007 | 2,430 | 1,537 | 1,545 | 1,413 | 3,337 | 2,017 | 4,300 | 3,410 | 2,377 | 3,967 | 4,374 |
| Total Oil Exploration and Development Expenditures | $ 4,768 | $ 7,353 | $ 7,230 | $ 8,673 | $ 9,640 | $11,457 | $17,630 | $22,707 | $34,366 | $35,590 | $28,290 | $29,793 |
| **Exploration and Development/ U.S. Oil Barrel Equivalent** | $ 2.57 | $ 2.98 | $ 4.61 | $ 5.61 | $ 6.66 | $ 3.77 | $ 8.65 | $ 5.28 | $ 9.70 | $ 14.98 | $ 7.13 | $ 6.81 |
| **Production Allocation** [3] | | | | | | | | | | | | |
| Crude Oil and Lease Condensate | 3,361 | 3,203 | 3,057 | 2,976 | 3,009 | 3,178 | 3,121 | 3,147 | 3,129 | 3,157 | 3,171 | 3,250 |
| Associated Gas (Dry) | 798 | 709 | 637 | 636 | 599 | 555 | 544 | 544 | 738 | 516 | 532 | 560 |
| Associated Gas Liquids | 272 | 221 | 272 | 274 | 251 | 238 | 285 | 279 | 280 | 287 | 268 | 287 |
| Total "Oil Benefit" | 4,431 | 4,133 | 3,967 | 3,886 | 3,859 | 3,971 | 3,950 | 3,970 | [illegible] | 3,960 | 3,971 | 4,097 |
| Total Production Expenditures | $ 2,884 | $ 3,791 | $ 4,590 | $ 5,138 | $ 5,838 | $ 6,659 | $ 7,781 | $16,187 | $23,074 | $28,093 | $26,034 | $24,439 |
| **Production Expenditures/ U.S. Oil Barrel Equivalent** | $ .65 | $ .91 | $ 1.15 | $ 1.31 | $ 1.51 | $ 1.68 | $ 1.98 | $ 4.09 | $ 8.60 | $ 7.12 | $ 6.55 | $ 5.97 |
| **Overall Cost Structure** Average Exploration, Development, and Production Costs/ **U.S. Oil Barrel Equivalent** | $ 3.22 | $ 3.89 | $ 5.76 | $ 6.92 | $ 8.17 | $ 5.45 | $ 10.63 | $ 9.37 | $ 18.30 | $ 22.11 | $ 13.68 | $ 12.78 |

[1] Method used to allocate expenses to new reserve additions and production is current year calculation; this method was chosen to illustrate annual amounts spent and what was "gotten for it."

[2] Amounts in millions of then current dollars.

[3] Oil and natural gas liquids in millions of 42 U.S. gallons. Natural gas in billions of cubic feet and converted to equivalent barrels at a rate of 6,000 cubic feet to one barrel.

Source: U.S. Department of Commerce, Joint Association Survey, CRS

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Table [illegible]

## ESTIMATED REPLACEMENT EXPENSES FOR ONE DOMESTIC MCF OF NON ASSOCIATED GAS EQUIVALENT .1

| | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Gas Exploration Expenditures:** .a | | | | | | | | | | | | |
| Drilling and Equipping Wells | $ 687 | $ 1,124 | $ 1,549 | $ 1,721 | $ 2,165 | $ 3,168 | $ 4,186 | $ 6,279 | $ 9,208 | $ 9,364 | $ 5,032 | $ 3,054 |
| Acquiring Undeveloped Acreage | 1,776 | 2,087 | 887 | 1,512 | 1,290 | 1,442 | 3,310 | 3,949 | 5,394 | 4,081 | 4,000 | 3,750 |
| Land Dept. Leasing and Scouting | 38 | 48 | 56 | 63 | 82 | 88 | 112 | 147 | 180 | 329 | 212 | 200 |
| Geological and Geophysical | 290 | 304 | 226 | 346 | 616 | 514 | 609 | 935 | 1,611 | 1,499 | 1,250 | 1,300 |
| Lease Rental | 65 | 72 | 82 | 83 | 98 | 114 | 125 | 173 | 240 | 238 | 256 | 252 |
| Test Hole Contributions | 7 | 6 | 8 | 11 | 16 | 17 | 11 | 14 | 17 | 33 | 12 | 9 |
| Other, Incl. Direct Overhead | 53 | 63 | 121 | 130 | 153 | 197 | 352 | 378 | 499 | 396 | 800 | 460 |
| General and Administrative | 102 | 145 | 171 | 203 | 207 | 264 | 231 | 485 | 554 | 732 | 625 | 860 |
| Total Gas Exploration | $ 3,018 | $ 4,044 | $ 3,130 | $ 4,068 | $ 4,436 | $ 5,783 | $ 9,134 | $12,380 | $17,713 | $16,[illegible] | $11,887 | $ 9,873 |
| **Gas Development Expenditures:** | | | | | | | | | | | | |
| Drilling and Equipping Wells | $ 819 | $ 1,035 | $ 1,643 | $ 1,785 | $ 2,614 | $ 3,713 | $ 4,434 | $ 5,106 | $ 7,257 | $ 8,284 | $ 5,514 | $ 6,153 |
| Lease Equipment | 329 | 330 | 400 | 595 | 643 | 870 | 850 | 1,420 | 1,900 | 2,054 | 2,000 | 1,930 |
| Acquiring Producing Acreage | 73 | 180 | 131 | 152 | 153 | 335 | 2,735 | 1,078 | 486 | 680 | 840 | 930 |
| Improved Recovery Programs | 18 | 31 | 46 | 19 | 23 | 32 | 36 | 141 | 219 | 292 | 315 | 337 |
| Other, Incl. Direct Overhead | - | - | - | 499 | 336 | 334 | 372 | 356 | 481 | 370 | 350 | 325 |
| General and Administrative | 81 | 111 | 156 | 177 | 188 | 230 | 288 | 372 | 458 | 473 | 500 | 530 |
| Total Gas Development | $ 1,321 | $ 1,688 | $ 2,376 | $ 3,227 | $ 3,957 | $ 5,594 | $ 8,635 | $ 9,383 | $10,723 | $12,073 | $ 9,519 | $10,207 |
| **Gas Production Expenditures:** | | | | | | | | | | | | |
| Direct Operating Expenses | $ 319 | $ 649 | $ 791 | $ 946 | $ 1,161 | $ 1,415 | $ 1,751 | $ 2,271 | $ 3,376 | $ 3,766 | $ 3,926 | $ 3,861 |
| Taxes, Excl. Income Tax | 482 | 767 | 873 | 949 | 1,049 | 1,189 | 1,375 | 2,282 | 3,319 | 3,303 | 3,000 | 2,750 |
| General and Administrative | 348 | 302 | 384 | 433 | 453 | 535 | 590 | 856 | 1,122 | 1,524 | 1,500 | 1,350 |
| Other Indirect Expenses | 97 | 126 | 179 | 184 | 218 | 197 | 289 | 631 | 2,056 | 1,481 | 1,150 | 1,100 |
| Total Gas Production | $ 1,326 | $ 1,843 | $ 2,227 | $ 2,512 | $ 2,880 | $ 3,336 | $ 3,905 | $ 6,039 | $ 9,873 | $ 9,974 | $ 9,576 | $ 9,061 |

| | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reserve Allocation** .b | | | | | | | | | | | | |
| Non-Associated Dry Natural Gas | 3,980 | 7,037 | 10,371 | 7,460 | 11,395 | 17,383 | 10,000 | 10,975 | 18,759 | 13,670 | 11,895 | 12,041 |
| Non-Associated Natural Gas Liquids | 120 | 2,730 | 2,154 | 1,470 | 1,458 | 2,994 | 1,870 | 2,781 | 3,579 | 2,886 | 4,638 | 1,710 |
| Total "Gas Economics Benefit" | 4,109 | 9,767 | 12,525 | 8,930 | 12,853 | 20,376 | 11,870 | 13,756 | 22,328 | 16,564 | 16,533 | 13,751 |
| Total Gas Exploration and Development Expenditures | $ 4,144 | 6,302 | $ 5,490 | $ 7,305 | $ 8,303 | $11,067 | $17,769 | $21,602 | $28,436 | $29,035 | $21,446 | $19,882 |
| **Exploration and Development/ U.S. Non-Associated MCF Equivalent** | $ 1.01 | $ .65 | $ .44 | $ .82 | $ .65 | $ .55 | $ 1.50 | $ 1.57 | $ 1.27 | $ 1.75 | $ 1.30 | $ 1.45 |
| **Production Allocation** .b | | | | | | | | | | | | |
| Non-Associated Dry Natural Gas | 17,816 | 17,091 | 15,779 | 15,600 | 15,301 | 13,670 | 15,991 | 15,434 | 15,550 | 14,390 | 12,597 | 13,836 |
| Non-Associated Natural Gas Liquids | 2,814 | 2,814 | 2,588 | 2,562 | 2,682 | 2,354 | 2,768 | 2,766 | 2,836 | 2,734 | 2,742 | 2,934 |
| Total "Natural Gas Benefit" | 20,630 | 19,905 | 18,366 | 18,170 | 17,983 | 16,034 | 18,759 | 18,200 | 18,386 | 17,123 | 15,339 | 16,770 |
| Total Non-Associated Natural Gas Prod. Expenditures | $ 1,326 | $ 1,843 | $ 2,227 | $ 2,512 | $ 2,880 | $ 3,336 | $ 3,905 | $ 6,099 | $ 9,873 | $ 9,974 | $ 9,576 | $ 9,061 |
| **Production Expen./Per U.S. MCF** | $ .06 | $ .09 | $ .12 | $ .14 | $ .16 | $ .19 | $ .21 | $ .33 | $ .54 | $ .58 | $ .63 | $ .54 |
| **Overall Cost Structure** | | | | | | | | | | | | |
| Average Exploration, Development, and Production Costs/U.S. MCF | $ 1.07 | $ .74 | $ .56 | $ .96 | $ .81 | $ .74 | $ 1.71 | $ 1.90 | $ 1.81 | $ 2.33 | $ 1.93 | $ 1.99 |

.1 Method used to allocate expenses to new reserve additions and production is current year calculation; this method was chosen to illustrate annual amounts spent and what was "gotten for it."

.a Amounts in millions of then current dollars.

.b Natural gas liquids converted into natural gas at the rate of one barrel to 6,000 cubic feet. Natural gas in billions of cubic feet.

Source: U.S. Department of Commerce, Joint Association Survey, CRW

Table 11

## ESTIMATED REPLACEMENT EXPENSES FOR ONE U.S. HYDROCARBON BARREL EQUIVALENT [1]

| | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Oil and Gas Exploration Expenditures: [a] | | | | | | | | | | | | |
| Drilling and Equipping Wells | $ 1,128 | $ 1,834 | $ 2,670 | $ 2,885 | $ 3,732 | $ 5,160 | $ 6,863 | $10,843 | $17,052 | $18,393 | $ 9,677 | $ 7,102 |
| Acquiring Undeveloped Acreage | 3,552 | 5,774 | 1,615 | 3,034 | 2,980 | 2,883 | 7,037 | 7,899 | 11,180 | 8,183 | 8,000 | 7,900 |
| Land Dept. Leasing and Scouting | 77 | 91 | 113 | 126 | 164 | 164 | 224 | 295 | 370 | 458 | 425 | 400 |
| Geological and Geophysical | 400 | 360 | 653 | 692 | 833 | 1,029 | 1,318 | 1,871 | 2,823 | 2,998 | 2,500 | 2,600 |
| Lease Rental | 151 | 179 | 205 | 207 | 246 | 285 | 312 | 429 | 600 | 644 | 640 | 630 |
| Test Hole Contributions | 14 | 9 | 17 | 22 | 33 | 25 | 23 | 38 | 34 | 47 | 25 | 18 |
| Other, Incl. Direct Overhead | 186 | 167 | 242 | 241 | 305 | 394 | 524 | 757 | 999 | 1,192 | 1,000 | 905 |
| General and Administrative | 204 | 291 | 242 | 483 | 414 | 480 | 482 | 893 | 1,198 | 1,421 | 1,250 | 1,220 |
| Total Oil and Gas Exploration | $ 5,630 | $ 8,931 | $ 5,857 | $ 7,603 | $ 8,307 | $10,431 | $16,863 | $22,013 | $34,180 | $33,316 | $23,317 | $20,675 |
| Oil and Gas Development Expenditures: [a] | | | | | | | | | | | | |
| Drilling and Equipping Wells | $1,949 | $ 2,325 | $3,901 | $ 4,376 | $ 6,226 | $ 7,901 | $ 9,316 | $13,157 | $19,013 | $21,035 | $15,427 | $18,104 |
| Lease Equipment | 572 | 824 | 1,300 | 1,487 | 1,600 | 2,175 | 2,146 | *,573 | 4,700 | 5,135 | 5,000 | 4,800 |
| Acquiring Producing Acreage | 183 | 474 | 303 | 381 | 383 | 450 | 5,511 | 3,415 | 973 | 1,512 | 2,000 | 2,300 |
| Improved Recovery Programs | 353 | 625 | 939 | 379 | 461 | 639 | 528 | 941 | 1,450 | 1,944 | 2,100 | 2,250 |
| Other, Incl. Direct Overhead | - | - | - | 979 | 672 | 660 | 544 | 713 | 802 | 740 | 700 | 650 |
| General and Administrative | 165 | 225 | 326 | 355 | 376 | 640 | 601 | 749 | 914 | 951 | 1,000 | 1,150 |
| Total Oil and Gas Development | $ 3,222 | $ 4,473 | $ 6,769 | $ 8,156 | $ 9,726 | $12,073 | $18,546 | $21,364 | $28,522 | $31,317 | $26,227 | $29,204 |
| Oil and Gas Production Expenditures: [a] | | | | | | | | | | | | |
| Direct Operating Expenses | $ 2,984 | $ 3,368 | $3,953 | $ 4,507 | $ 5,278 | $ 6,152 | $ 7,295 | $ 9,462 | $13,503 | $14,405 | $15,100 | $14,300 |
| Taxes, Excl. Income Tax | 925 | 1,314 | 1,706 | 1,898 | 2,099 | 2,379 | 2,751 | 4,965 | 6,639 | 6,606 | 6,000 | 5,500 |
| General and Administrative | 497 | 602 | 769 | 866 | 905 | 1,070 | 1,181 | 1,710 | 2,365 | 3,048 | 3,000 | 2,700 |
| Other Indirect Expenses | 194 | 351 | 358 | 369 | 436 | 394 | 539 | 6,309 | 20,358 | 14,008 | 11,500 | 11,000 |
| Total Oil and Gas Production | $ 4,310 | $ 5,634 | $6,826 | $ 7,640 | $ 8,718 | $ 9,995 | $11,766 | $22,346 | $42,967 | $38,067 | $35,600 | $33,500 |
| Total Oil and Gas Expenditures | $13,062 | $19,228 | $19,652 | $23,398 | $26,749 | $32,499 | $47,175 | $66,605 | $105,669 | $102,700 | $85,344 | $83,174 |

| | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Reserve Allocation [b] | | | | | | | | | | | | |
| Crude Oil | 2,145 | 1,993 | 1,318 | 1,083 | 1,160 | 2,583 | 1,410 | 2,970 | 2,570 | 1,382 | 2,097 | 3,748 |
| Natural Gas (Dry) | 1,138 | 1,647 | 1,747 | 1,259 | 2,163 | 3,238 | 2,037 | 2,787 | 3,574 | 2,881 | 2,421 | 2,402 |
| Natural Gas Liquids | 409 | 420 | 619 | 833 | 291 | 596 | 570 | 844 | 1,081 | 874 | 1,405 | 518 |
| Total Reserve Additions | 3,692 | 4,060 | 3,684 | 3,175 | 3,594 | 6,417 | 4,017 | 6,601 | 7,225 | 5,137 | 5,923 | 6,668 |
| Total Exploration and Development Expenditures | $ 8,852 | $13,394 | $12,626 | $15,758 | $18,031 | $22,506 | $35,409 | $44,399 | $62,702 | $64,633 | $49,744 | $49,874 |
| Exploration and Development/ U.S. Hydrocarbon Barrel Equivalent | $ 2.40 | $ 3.35 | $ 3.48 | $ 4.96 | $ 5.02 | $ 3.51 | $ 8.82 | $ 6.72 | $ 8.68 | $ 12.58 | $ 7.40 | $ 7.45 |
| Production Allocation [b] | | | | | | | | | | | | |
| Crude Oil and Lease Condensate | 3,361 | 3,203 | 3,057 | 2,976 | 3,009 | 3,178 | 3,121 | 3,147 | 3,129 | 3,157 | 3,171 | 3,250 |
| Natural Gas (Dry) | 3,786 | 3,553 | 3,287 | 3,257 | 3,141 | 3,134 | 3,210 | 3,117 | 3,123 | 2,918 | 2,631 | 2,866 |
| Natural Gas Liquids | 741 | 724 | 701 | 701 | 699 | 664 | 727 | 731 | 741 | 721 | 725 | 776 |
| Total Production | 7,878 | 7,480 | 7,045 | 6,934 | 6,849 | 6,976 | 7,058 | 6,995 | 6,993 | 6,796 | 6,527 | 6,892 |
| Total Production Expenditures | $ 4,210 | $5,634 | $ 6,826 | $ 7,640 | $ 8,718 | $ 9,995 | $11,766 | $22,346 | $42,967 | $38,067 | $35,600 | $33,500 |
| Production Expenditures/ U.S. Hydrocarbon Barrel Equivalent | $ .54 | $ .75 | $ .97 | $ 1.10 | $ 1.27 | $ 1.43 | $ 1.67 | $ 3.18 | $ 6.14 | $ 5.60 | $ 5.45 | $ 4.86 |
| Overall Cost Structure<br>Average Exploration, Development, and Production Costs/ U.S. Hydrocarbon Equivalent | $ 2.94 | $ 4.10 | $ 4.45 | $ 6.06 | $ 6.29 | $ 4.94 | $ 10.49 | $ 9.90 | $ 14.83 | $ 18.18 | $ 13.05 | $ 12.31 |

[1] Method used to allocate expenses to new reserve additions and production is current year calculation; this method was chosen to illustrate annual amounts spent and what was "gotten for it."

[a] Amounts in millions of then current dollars.

[b] Oil and natural gas liquids in millions of 42 U.S. gallons. Natural gas in billions of cubic feet and converted to equivalent barrels at a rate of 6,000 cubic feet to one barrel.

Source: U.S. Department of Commerce, Joint Association Survey, CNW

Table 12

Copeland, Wickersham, Wiley & Co.

### COMPARISON OF DOMESTIC PRODUCTION, RIG ACTIVITY, WELLHEAD PRICES
### U.S. PRODUCTION - CRUDE AND CONDENSATE
### (Thousands of Barrels Per Day)

| Year | Alaska | Other Domestic | Total Domestic | Average Rig Count-U.S. | Average U.S. Crude Wellhead Price |
|---|---|---|---|---|---|
| 1973 | 199 | 9,009 | 9,208 | 1,194 | $ 3.98 |
| 1974 | 193 | 8,571 | 8,764 | 1,473 | 6.74 |
| 1975 | 191 | 8,171 | 8,362 | 1,659 | 7.56 |
| 1976 | 173 | 7,946 | 8,119 | 1,658 | 8.19 |
| 1977 | 463 | 7,716 | 8,179 | 2,001 | 8.57 |
| 1978 | 1,245 | 7,456 | 8,701 | 2,259 | 9.00 |
| 1979 | 1,402 | 7,151 | 8,553 | 2,177 | 12.64 |
| 1980 | 1,617 | 6,980 | 8,597 | 2,910 | 21.59 |
| 1981 | 1,609 | 6,963 | 8,572 | 3,970 | 31.77 |
| 1982 | 1,696 | 6,953 | 8,649 | 3,105 | 28.52 |
| 1983 | 1,714 | 6,974 | 8,688 | 2,232 | 26.19 |
| 1984 | 1,722 | 7,157 | 8,879 | 2,428 | 25.88 |
| 1985 | 1,809 | 7,111 | 8,920 | 1,980 | 23.88 |
| | | | **Percentage Change** | | |
| 1974 | ( 3.0)% | ( 4.9)% | ( 4.8)% | 23.4 % | 73.3 % |
| 1975 | ( 1.0) | ( 4.6) | ( 4.6) | 12.6 | 12.2 |
| 1976 | ( 9.4) | ( 2.8) | ( 2.9) | ( 0.1) | 8.3 |
| 1977 | 167.6 | ( 2.9) | 0.7 | 20.7 | 4.6 |
| 1978 | 168.9 | ( 3.4) | 6.4 | 12.9 | 5.0 |
| 1979 | 12.6 | ( 4.1) | ( 1.7) | ( 3.6) | 40.4 |
| 1980 | 15.3 | ( 2.4) | 0.5 | 33.7 | 70.8 |
| 1981 | ( 0.5) | ( 0.2) | ( 0.3) | 36.4 | 47.2 |
| 1982 | 5.4 | ( 0.1) | 0.9 | (21.8) | (10.2) |
| 1983 | 1.1 | 0.3 | 0.5 | (28.1) | ( 8.2) |
| 1984 | 0.5 | 2.6 | 2.2 | 8.8 | ( 1.2) |
| 1985 | 5.1 | ( 0.6) | 0.5 | (18.5) | ( 7.7) |
| | | | **Percentage of Total** | | |
| 1973 | 2.2 % | 97.8 % | 100.0% | | |
| 1974 | 2.2 | 97.8 | 100.0 | | |
| 1975 | 2.3 | 97.7 | 100.0 | | |
| 1976 | 2.1 | 97.9 | 100.0 | | |
| 1977 | 5.7 | 94.3 | 100.0 | | |
| 1978 | 14.3 | 85.7 | 100.0 | | |
| 1979 | 16.4 | 83.6 | 100.0 | | |
| 1980 | 18.8 | 81.2 | 100.0 | | |
| 1981 | 18.8 | 81.2 | 100.0 | | |
| 1982 | 19.6 | 80.4 | 100.0 | | |
| 1983 | 19.7 | 80.3 | 100.0 | | |
| 1984 | 19.4 | 80.6 | 100.0 | | |
| 1985 | 20.3 | 79.7 | 100.0 | | |

Source: Dept. of Energy, American Petroleum Institute, Oil and Gas Journal

Table 13

Copeland, Wickersham, Wiley & Co.

## U.S. DRILLING ACTIVITY

| Year | Total Wildcat Wells | Total Other Wells | Total Wells | Total Footage (feet/MM) | Wildcat Wells As a % of Total Wells | Average U.S. Crude Wellhead Price($/bbl) |
|---|---|---|---|---|---|---|
| 1973 | 7,466 | 20,136 | 27,602 | 138.9 | 27% | $ 3.89 |
| 1974 | 8,619 | 24,274 | 32,893 | 153.2 | 26 | 6.74 |
| 1975 | 9,214 | 29,883 | 39,097 | 178.5 | 24 | 7.56 |
| 1976 | 9,234 | 32,221 | 41,455 | 185.3 | 22 | 8.19 |
| 1977 | 9,961 | 36,518 | 46,479 | 215.0 | 21 | 8.57 |
| 1978 | 10,677 | 37,836 | 48,513 | 231.4 | 22 | 9.00 |
| 1979 | 10,484 | 40,779 | 51,263 | 243.2 | 20 | 12.64 |
| 1980 | 13,017 | 51,611 | 64,628 | 294.3 | 20 | 21.59 |
| 1981 | 15,168 | 65,369 | 80,537 | 366.2 | 19 | 31.77 |
| 1982 | 16,470 | 71,631 | 88,101 | 401.5 | 19 | 28.52 |
| 1983 | 13,890 | 64,652 | 78,542 | 330.8 | 18 | 26.19 |
| 1984 | 13,887 | 70,296 | 84,183 | 353.7 | 16 | 25.88 |
| 1985 | 13,866 | 65,744 | 79,610 | 356.7 | 17 | 23.88 |

### Percentage Change

| | | | | | |
|---|---|---|---|---|---|
| 1974 | 15.4 % | 20.5 % | 19.2 % | 10.3 % | 73.3 % |
| 1975 | 6.9 | 23.1 | 18.9 | 16.5 | 12.2 |
| 1976 | 0.2 | 7.8 | 6.0 | 3.8 | 8.3 |
| 1977 | 7.9 | 13.3 | 12.1 | 16.0 | 4.6 |
| 1978 | 7.2 | 3.6 | 4.4 | 7.6 | 5.0 |
| 1979 | ( 1.8) | 7.8 | 5.7 | 5.1 | 40.4 |
| 1980 | 24.2 | 26.6 | 26.1 | 21.0 | 70.8 |
| 1981 | 16.5 | 26.6 | 24.6 | 24.4 | 47.1 |
| 1982 | 8.6 | 9.6 | 9.4 | 9.6 | (10.2) |
| 1983 | (15.7) | ( 9.7) | (10.8) | (17.6) | ( 8.2) |
| 1984 | 0.0 | 8.7 | 7.2 | 6.9 | ( 1.2) |
| 1985 | ( 0.1) | ( 6.5) | ( 5.4) | 0.8 | ( 7.7) |

Source: Dept. of Energy, American Petroleum Institute, Oil and Gas Journal

Table 14

Copeland, Wickersham, Wiley & Co.

## "P" COMPANY
## DEVELOPED RESERVES
## GENERAL & ADMINISTRATIVE COSTS INCLUDED

| Case | Future Net Income ($Millions) | Present Value Discount Rate ($Millions) | | | Loan Value ($Millions) | Reserves |
|---|---|---|---|---|---|---|
| | | 10% | 15% | 20% | | |
| $25.00/bbl. Oil<br>$2.75/MCF Gas | 38.7 | 26.0 | 22.9 | 20.4 | 12.2 | 4.1 Million barrels<br>1.5 Billion cubic ft. |
| $20.00/bbl. Oil<br>$2.50/MCF Gas | 25.6 | 19.0 | 16.8 | 15.2 | 9.0 | 3.5 Million barrels<br>1.2 Billion cubic ft. |
| $15.00/bbl. Oil<br>$2.25/MCF Gas | 13.3 | 10.5 | 9.5 | 8.7 | 5.0 | 3.1 Million barrels<br>1.0 Billion cubic ft. |
| $10.00/bbl. Oil<br>$2.00/MCF Gas | 3.6 | 3.2 | 3.0 | 2.9 | 0.8 | 2.1 Million barrels<br>0.7 Billion cubic ft. |
| $8.50/bbl. Oil<br>$1.75/MCF Gas | 1.7 | 1.5 | 1.5 | 1.4 | | 1.3 Million barrels<br>0.4 Billion cubic ft. |

- Future Net Income = Oil & Gas Revenues - Lease Operating Expenses - Production Taxes - General & Administrative Expenses.
- General & Administrative costs include Accounting/Legal/Corporate/Insurance functions.
- All figures are before federal income tax.

Table 15

Copeland, Wickersham, Wiley & Co.

## "F" COMPANY
## DEVELOPMENT DRILLING ECONOMICS

| Case | Investment ($Millions) | Future Net Income ($Millions) | Present Value Discount Rate ($Millions) 10% | 15% | 20% | 30% | Reserves |
|---|---|---|---|---|---|---|---|
| $20.00/bbl. Oil<br>$2.50/MCF Gas | 12.0 | 49.5 | 29.4 | 24.5 | 22.1 | 18.2 | 4.7 Million barrels<br>1.7 Billion cubic ft. |
| $15.00/bbl. Oil<br>$2.25/MCF Gas | 12.0 | 29.2 | 19.9 | 17.4 | 15.6 | 13.3 | 4.3 Million barrels<br>1.6 Billion cubic ft. |
| $10.00/bbl. Oil<br>$2.00/MCF Gas | 12.0 | 13.9 | 10.9 | 10.0 | 12.0 | 8.6 | 3.9 Million barrels<br>1.4 Billion cubic ft. |

- Future Net Income = Oil & Gas Revenues - Lease Operating Expenses - Production Taxes.
- Future Net Income does not reflect General & Administrative costs necessary to supervise operations.
- All figures are before federal income tax.

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Table 16

Copeland, Wickersham, Wiley & Co.

### "P" COMPANY
### DEVELOPED RESERVES
### GENERAL & ADMINISTRATIVE COSTS EXCLUDED

| Case | Future Net Income ($Millions) | Present Value Discount Rate ($Millions) 10% | 15% | 20% | Loan Value ($Millions) | Reserves |
|---|---|---|---|---|---|---|
| $25.00/bbl. Oil<br>$2.75/MCF Gas | 54.0 | 33.6 | 28.7 | 25.2 | 15.6 | 4.1 Million barrels<br>1.5 Billion cubic ft. |
| $20.00/bbl. Oil<br>$2.50/MCF Gas | 40.9 | 26.0 | 22.5 | 19.8 | 12.1 | 4.1 Million barrels<br>1.5 Billion cubic ft. |
| $15.00/bbl. Oil<br>$2.25/MCF Gas | 25.8 | 16.9 | 14.7 | 13.1 | 7.9 | 4.1 Million barrels<br>1.5 Billion cubic ft. |
| $10.00/bbl. Oil<br>$2.00/MCF Gas | 10.2 | 7.8 | 7.0 | 6.4 | 3.7 | 3.5 Million barrels<br>1.2 Billion cubic ft. |

- Future Net Income = Oil & Gas Revenues - Lease Operating Expenses - Production Taxes.
- Future Net Income does not reflect General & Administrative costs necessary to supervise operations.
- All figures are before federal income tax.

Table 17

Copeland, Wickersham, Wiley & Co.

## ESTIMATED PRODUCTION LOANS - "BIG FIVE" TEXAS BANKS

| Case | Loan Value ($Billions) | Loan Value As % of Initial |
|---|---|---|
| $25.00/bbl. Oil<br>$2.75/MCF Gas | 6.0 | 100% |
| $20.00/bbl. Oil<br>$2.50/MCF Gas | 4.7 | 78% |
| $15.00/bbl. Oil<br>$2.25/MCF Gas | 3.1 | 51% |
| $10.00/bbl. Oil<br>$2.00/MCF Gas | 1.4 | 24% |

Table 18

Copeland, Wickersham, Wiley & Co.

Oil Replacement Economics

| Discounted FNI | |
|---|---|
| 10% | 1641 |
| 15% | 513 |
| 20% | - 272 |
| 25% | - 840 |
| 30% | -1271 |

| | W.I. | N.I. | ($/bbl) | ($/MCF) |
|---|---|---|---|---|
| Initial | 1.0000 | 0.884615 | 26.50 | 2.75 |
| Final | 1.0000 | 0.884615 | 26.50 | 2.75 |

| | Gross | | Net | | Average Prices | | Gross Revenue $M | |
|---|---|---|---|---|---|---|---|---|
| Year | Oil/Cond. Barrels | Gas MMBTU | Oil/Cond. Barrels | Gas MMCF | Oil ($/bbl) | Gas ($/MCF) | FNR Oil | FNR Gas |
| 1986 | 125,000 | 0 | 110,577 | 0 | 26.50 | 2.75 | 2,930 | 0 |
| 1987 | 109,375 | 0 | 96,755 | 0 | 26.50 | 2.75 | 2,564 | 0 |
| 1988 | 95,703 | 0 | 84,660 | 0 | 26.50 | 2.75 | 2,244 | 0 |
| 1989 | 83,740 | 0 | 74,078 | 0 | 26.50 | 2.75 | 1,963 | 0 |
| 1990 | 73,273 | 0 | 64,818 | 0 | 26.50 | 2.75 | 1,718 | 0 |
| 1991 | 64,114 | 0 | 56,716 | 0 | 26.50 | 2.75 | 1,503 | 0 |
| 1992 | 56,099 | 0 | 49,626 | 0 | 26.50 | 2.75 | 1,315 | 0 |
| 1993 | 49,087 | 0 | 43,423 | 0 | 26.50 | 2.75 | 1,151 | 0 |
| 1994 | 42,951 | 0 | 37,995 | 0 | 26.50 | 2.75 | 1,007 | 0 |
| 1995 | 37,582 | 0 | 33,246 | 0 | 26.50 | 2.75 | 881 | 0 |
| 1996 | 32,884 | 0 | 29,090 | 0 | 26.50 | 2.75 | 771 | 0 |
| 1997 | 28,774 | 0 | 25,454 | 0 | 26.50 | 2.75 | 675 | 0 |
| 1998 | 25,177 | 0 | 22,272 | 0 | 26.50 | 2.75 | 590 | 0 |
| 1999 | 22,030 | 0 | 19,488 | 0 | 26.50 | 2.75 | 516 | 0 |
| 2000 | 19,276 | 0 | 17,052 | 0 | 26.50 | 2.75 | 452 | 0 |
| 2001 | 16,867 | 0 | 14,921 | 0 | 26.50 | 2.75 | 395 | 0 |
| 2002 | 14,758 | 0 | 13,055 | 0 | 26.50 | 2.75 | 345 | 0 |
| Subtotal | 896,691 | 0 | 793,227 | 0 | | | 21,021 | 0 |
| Remainder | 103,309 | 0 | 91,388 | 0 | | | 2,422 | 0 |
| Total | 1,000,000 | 0 | 884,615 | 0 | | | 23,442 | 0 |

| | Total ($M) | Expenses/Taxes ($M) | | | | | FNI Before FIT - ($M) | | |
|---|---|---|---|---|---|---|---|---|---|
| Year | FNR Total | Lease Expense | WPT Tax | Prod/ A.V. Tax | Dvlp. Costs | Total Expenses | Annual Undisc. | Cmltv. Undisc. | Disc. at 18% |
| 1986 | 2,930 | 1,125 | | | 7,000 | 8,125 | -5,195 | -5,195 | -4,843 |
| 1987 | 2,564 | 984 | | | | 984 | 1,580 | -3,615 | -3,595 |
| 1988 | 2,244 | 861 | | | | 861 | 1,382 | 02,233 | -2,669 |
| 1989 | 1,963 | 754 | | | | 754 | 1,209 | -1,024 | -1,983 |
| 1990 | 1,718 | 659 | | | | 659 | 1,058 | 35 | -1,474 |
| 1991 | 1,503 | 577 | | | | 577 | 926 | 961 | -1,097 |
| 1992 | 1,315 | 505 | | | | 505 | 810 | 1,771 | - 817 |
| 1993 | 1,151 | 442 | | | | 442 | 709 | 2,480 | - 610 |
| 1994 | 1,007 | 387 | | | | 387 | 620 | 3,100 | - 456 |
| 1995 | 881 | 338 | | | | 338 | 543 | 3,643 | - 342 |
| 1996 | 771 | 296 | | | | 296 | 475 | 4,118 | - 257 |
| 1997 | 675 | 259 | | | | 259 | 416 | 4,533 | - 194 |
| 1998 | 590 | 227 | | | | 227 | 364 | 4,897 | - 148 |
| 1999 | 516 | 198 | | | | 198 | 318 | 5,215 | - 113 |
| 2000 | 452 | 173 | | | | 173 | 278 | 5,494 | - 88 |
| 2001 | 395 | 152 | | | | 152 | 244 | 5,737 | - 69 |
| 2002 | 345 | 133 | | | | 133 | 213 | 5,950 | - 55 |
| Subtotal | 21,021 | 8,070 | 0 | 0 | 7,000 | 15,070 | 5,950 | 5,950 | - 55 |
| Remainder | 2,422 | 930 | 0 | 85 | | 1,015 | 1,407 | 1,407 | 63 |
| Total | 23,442 | 9,000 | 0 | 85 | 7,000 | 16,085 | 7,538 | 7,358 | 8 |

Table 19

|  | Replacement Costs for One Domestic Barrel of Oil |  |  |  |  |  | Future Cost Structure |
|---|---|---|---|---|---|---|---|
|  | 1974 | 1976 | 1978 | 1980 | 1982 | 1984 |  |
| Finding and Development | $3 | $5 | $4 | $5 | $15 | $7 | $7-12 |
| Operating | 1 | 1 | 2 | 4 | 7 | 6 | 5- 6 |
| Royalties | 1 | 1 | 1 | 3 | 4 | 3 | 3 |
| Corporate Expenses | 1 | 1 | 1 | 3 | 3 | 3 | 3 |
| Total Costs | $6 | $8 | $8 | $15 | $29 | $19 | $18-24 |
| Wellhead Price | $7 | $8 | $9 | $22 | $29 | $26 | $26.50 |

Table 20

Copeland, Wickersham, Wiley & Co.

## U.S. CRUDE AND PRODUCT INVENTORIES
(Amounts in Thousands of Barrels)

| | Crude | Refined Products | Total Crude & Refined Products | Domestic Demand |
|---|---|---|---|---|
| 1981 | | | | |
| March 31 | 394,000 | 883,000 | 1,277,000 | |
| June 30 | 392,200 | 882,200 | 1,274,400 | |
| September 30 | 366,400 | 891,300 | 1,257,700 | |
| December 31 | 366,300 | 893,000 | 1,259,300 | 15,890 |
| 1982 | | | | |
| March 31 | 380,700 | 792,400 | 1,173,100 | |
| June 30 | 352,100 | 751,200 | 1,103,300 | |
| September 30 | 350,300 | 792,100 | 1,142,400 | |
| December 31 | 348,100 | 794,100 | 1,142,200 | 14,798 |
| 1983 | | | | |
| March 31 | 358,600 | 705,000 | 1,063,000 | |
| June 30 | 350,500 | 722,500 | 1,073,000 | |
| September 30 | 347,800 | 790,600 | 1,138,400 | |
| December 31 | 348,800 | 740,800 | 1,089,000 | 15,524 |
| 1984 | | | | |
| March 31 | 333,800 | 730,300 | 1,064,100 | |
| June 30 | 356,100 | 740,400 | 1,096,500 | |
| September 30 | 330,400 | 743,900 | 1,074,300 | |
| December 31 | 338,080 | 764,700 | 1,102,780 | 16,191 |
| 1985 | | | | |
| March 31 | 334,880 | 650,300 | 985,100 | |
| June 30 | 342,700 | 694,400 | 1,037,100 | |
| September 30 | 316,100 | 681,800 | 997,900 | |
| December 31 | 321,900 | 696,700 | 1,018,600 | 15,962 |
| 1986 | | | | |
| February 28 | 333,318 | 790,063 | 1,123,381 | 16,442 |

Source: Petroleum Intelligence Weekly

Table 21

Copeland, Wickersham, Wiley & Co.

## DOMESTIC PRODUCT INVENTORIES
(Days of Supply - Based on Current Quarter Demand)

| | Gasoline * | Middle Distillates | Residual | Crude |
|---|---|---|---|---|
| **1981** | | | | |
| 4th Quarter | 38.3 | 62.9 | 42.5 | 23.2 |
| **1982** | | | | |
| 1st Quarter | 41.0 | 45.1 | 29.9 | 23.7 |
| 2nd Quarter | 33.2 | 40.5 | 34.0 | 24.1 |
| 3rd Quarter | 33.7 | 64.2 | 34.8 | 23.1 |
| 4th Quarter | 35.8 | 70.9 | 41.4 | 23.1 |
| **1983** | | | | |
| 1st Quarter | 39.9 | 54.1 | 33.0 | 23.6 |
| 2nd Quarter | 33.2 | 44.8 | 34.1 | 23.5 |
| 3rd Quarter | 33.5 | 57.3 | 37.4 | 23.2 |
| 4th Quarter | 34.6 | 56.3 | 39.8 | 22.6 |
| **1984** | | | | |
| 1st Quarter | 36.7 | 38.8 | 29.9 | 21.2 |
| 2nd Quarter | 37.2 | 36.6 | 38.1 | 23.1 |
| 3rd Quarter | 33.3 | 51.2 | 38.7 | 22.2 |
| 4th Quarter | 35.2 | 54.1 | 42.8 | 21.7 |
| **1985** | | | | |
| 1st Quarter | 35.5 | 41.1 | 34.4 | 20.7 |
| 2nd Quarter | 31.4 | 37.1 | 42.7 | 22.9 |
| 3rd Quarter | 32.0 | 45.5 | 38.4 | 21.5 |
| 4th Quarter | 32.1 | 45.5 | 39.2 | 20.3 |
| **1986** | | | | |
| 1st Quarter (thru 2/28) | 36.1 | 38.7 | 33.8 | 20.1 |

* Includes gas blending components.

Source: American Petroleum Institute, Oil and Gas Journal

Table 22

Copeland, Wickersham, Wiley & Co.

## FREE WORLD OIL BALANCE
(Amounts - Millions of Barrels Per Day)

| Absolute Level | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986E |
|---|---|---|---|---|---|---|---|---|
| Free World Demand | 51.2 | 49.4 | 46.9 | 45.7 | 44.6 | 45.4 | 45.5 | 46.0 |
| Total Supply | | | | | | | | |
| OPEC | 31.5 | 27.6 | 23.5 | 19.2 | 18.1 | 18.3 | 17.2 | 17.3 |
| Non-OPEC | 19.9 | 22.3 | 23.4 | 24.1 | 25.4 | 26.3 | 28.0 | 28.6 |
| Total | 51.4 | 49.9 | 46.9 | 43.3 | 43.5 | 44.6 | 45.2 | 45.9 |
| Inventory Change | 0.2 | 0.5 | 0.0 | ( 2.4) | ( 1.1) | ( 0.8) | ( 0.3) | ( 0.1) |
| **Percentage Change** | | | | | | | | |
| Free World Demand | | ( 3.5)% | ( 5.1)% | ( 2.6)% | ( 2.4)% | 1.8 % | 0.2 % | 1.1 % |
| Total Supply | | | | | | | | |
| OPEC | | (12.4) | (14.9) | (18.3) | ( 5.7) | 0.5 | ( 6.0) | 0.6 |
| Non-OPEC | | 12.1 | 4.9 | 3.0 | 5.4 | 3.5 | 6.5 | 2.1 |
| Total | | ( 2.9)% | ( 6.0)% | ( 7.7)% | 0.5 % | 2.5 % | 1.3 % | 1.5 % |

## FREE WORLD OIL BALANCE - QUARTERLY
(Amounts - Millions of Barrels Per Day)

| 1985E | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | Year |
|---|---|---|---|---|---|
| Free World Demand | 47.5 | 44.0 | 44.7 | 46.2 | 45.5 |
| Total Supply | | | | | |
| OPEC-Crude | 16.2 | 15.1 | 15.2 | 17.9 | 16.1 |
| -NGL | 1.1 | 1.0 | 1.0 | 1.1 | 1.1 |
| Subtotal | 17.1 | 16.0 | 15.6 | 19.0 | 17.2 |
| Non-OPEC | 27.4 | 28.0 | 28.4 | 28.7 | 28.0 |
| Total | 44.5 | 44.0 | 44.0 | 47.7 | 45.2 |
| Inventory Change | ( 2.8) | - | ( 0.5) | 1.5 | ( 0.3) |

| 1986E | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | Year |
|---|---|---|---|---|---|
| Free World Demand | 47.5 | 44.4 | 45.3 | 46.9 | 46.0 |
| Total Supply | | | | | |
| OPEC-Crude | 16.5 | 15.1 | 16.0 | 17.5 | 16.3 |
| -NGL | 1.1 | 1.0 | 1.0 | 1.1 | 1.0 |
| Subtotal-OPEC | 17.6 | 16.1 | 17.0 | 18.6 | 17.3 |
| Non-OPEC | 28.9 | 28.3 | 28.5 | 28.7 | 28.6 |
| Total | 46.5 | 44.4 | 45.5 | 47.3 | 45.9 |
| Inventory Change | ( 1.0) | ( 0.0) | 0.2 | 0.4 | ( 0.1) |

### Free World Demand - Percentage Change
(Year Over Year)

| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | Year |
|---|---|---|---|---|---|
| 1984 | 4.4 | 2.8 | 3.0 | ( 2.3) | 1.8 |
| 1985E | - | ( 1.1) | ( 1.1) | 3.3 | 0.2 |
| 1986E | - | 0.9 | 1.3 | 1.5 | 1.1 |

Source: Petroleum Intelligence Weekly
Estimates: Copeland, Wickersham, Wiley & Co.

Table 23

Copeland, Wickersham, Wiley & Co.

## U.S. CRUDE AND PRODUCT IMPORTS

| | Volume of Imports (000 b/d) | Total Absolute Cost of Imports ($Millions) | Average Cost of Imports ($/barrel) |
|---|---|---|---|
| **Total-1974** | | | |
| Crude | 3,477 | $ - | - |
| Products | 2,425 | - | - |
| Total | 5,902 | $26,073 | $10.81 |
| **Total-1980** | | | |
| Crude | 5,732 | $68,471 | $32.73 |
| Products | 1,299 | 13,511 | 28.50 |
| Total | 7,031 | $81,982 | $31.95 |
| **Total-1981** | | | |
| Crude | 4,826 | $64,319 | $36.48 |
| Products | 1,326 | 15,382 | 32.51 |
| Total | 6,152 | $79,701 | $35.64 |
| **Total-1982** | | | |
| Crude | 3,890 | $47,445 | $33.39 |
| Products | 1,370 | 15,212 | 30.44 |
| Total | 5,260 | $62,657 | $32.62 |
| **Total-1983** | | | |
| Crude | 3,540 | $38,184 | $29.51 |
| Products | 1,560 | 17,084 | 30.05 |
| Total | 5,100 | $55,268 | $29.68 |
| **Total-1984** | | | |
| Crude | 3,610 | $37,945 | $28.75 |
| Products | 1,930 | 21,264 | 30.16 |
| Total | 5,540 | $59,209 | $29.24 |
| **Total-1985** | | | |
| Crude | 3,450 | $34,123 | $27.07 |
| Products | 1,750 | 18,235 | 28.51 |
| Total | 5,200 | $52,358 | $27.55 |

Table 24

Copeland, Wickersham, Wiley & Co.

### OPEC AND WORLD LIQUIDS PRODUCTION
### (Amounts in Thousand of Barrels Per Day)

| Year | OPEC Production | Free World Production | Total World Production | OPEC Production As a % of Free World Production | OPEC Production As a % of Total World Product.. |
|---|---|---|---|---|---|
| 1972 | 25,092 | 44,205 | 53,540 | 57% | 47% |
| 1973 | 26,711 | 48,340 | 58,510 | 55 | 46 |
| 1974 | 31,055 | 47,610 | 58,620 | 65 | 53 |
| 1975 | 27,530 | 43,870 | 55,700 | 63 | 49 |
| 1976 | 31,090 | 47,485 | 60,085 | 65 | 52 |
| 1977 | 31,690 | 49,215 | 62,560 | 64 | 51 |
| 1978 | 30,275 | 48,935 | 63,050 | 62 | 48 |
| 1979 | 31,470 | 51,365 | 65,775 | 61 | 48 |
| 1980 | 27,450 | 48,020 | 62,745 | 57 | 44 |
| 1981 | 23,390 | 44,610 | 59,375 | 52 | 39 |
| 1982 | 19,935 | 42,120 | 57,020 | 47 | 35 |
| 1983 | 18,475 | 41,645 | 56,705 | 44 | 33 |
| 1984 | 18,345 | 42,685 | 57,800 | 43 | 32 |
| 1985 | 17,202 | 42,263 | 56,508 | 40 | 30 |

### Percentage Change

| | | | |
|---|---|---|---|
| 1973 | 6.5 % | 9.4 % | 9.3 % |
| 1974 | 16.3 | ( 1.5) | 0.2 |
| 1975 | (11.4) | ( 7.9) | ( 5.0) |
| 1976 | 12.9 | 8.2 | 7.9 |
| 1977 | 1.9 | 3.6 | 4.1 |
| 1978 | ( 4.5) | ( 0.6) | 0.8 |
| 1979 | 3.9 | 5.0 | 4.3 |
| 1980 | (12.7) | ( 6.5) | ( 4.6) |
| 1981 | (14.8) | ( 7.1) | ( 5.4) |
| 1982 | (14.8) | ( 5.6) | ( 4.0) |
| 1983 | ( 7.3) | ( 1.1) | ( 0.6) |
| 1984 | ( 0.7) | 2.5 | 1.9 |
| 1985 | ( 6.8) | ( 1.0) | ( 2.2) |

Source: British Petroleum Statistical Review, Petroleum Intelligence Weekly

Table 25

### OPEC AND WORLD
### PROVEN OIL RESERVES
(Billions of Barrels)

| Year | OPEC Oil Reserves | Free World Oil Reserves | Total World Oil Reserves | OPEC As a % of Free World Oil Reserves | OPEC As a % of Total World Oil Reserves |
|---|---|---|---|---|---|
| 1974 | 485.0 | 601.0 | 712.4 | 81% | 68% |
| 1975 | 449.9 | 554.9 | 657.9 | 81 | 68 |
| 1976 | 440.4 | 539.0 | 640.1 | 82 | 69 |
| 1977 | 439.9 | 547.8 | 645.8 | 80 | 68 |
| 1978 | 444.9 | 547.8 | 641.8 | 81 | 69 |
| 1979 | 435.6 | 552.2 | 642.2 | 79 | 68 |
| 1980 | 434.4 | 591.1 | 689.1 | 73 | 63 |
| 1981 | 430.5 | 571.9 | 677.0 | 75 | 64 |
| 1982 | 432.8 | 592.5 | 677.4 | 73 | 64 |
| 1983 | 448.3 | 593.4 | 677.7 | 76 | 66 |
| 1984 | 476.3 | 623.4 | 707.2 | 76 | 67 |

Percentage Change

| | | | |
|---|---|---|---|
| 1975 | ( 7.2)% | ( 7.7)% | ( 7.6)% |
| 1976 | ( 2.1) | ( 2.9) | ( 2.7) |
| 1977 | ( 0.1) | 1.6 | 0.9 |
| 1978 | 1.1 | - | ( 0.6) |
| 1979 | ( 2.1) | 0.8 | 0.1 |
| 1980 | ( 0.3) | 7.0 | 7.3 |
| 1981 | ( 0.9) | ( 3.2) | ( 1.8) |
| 1982 | 0.5 | 3.6 | 0.1 |
| 1983 | 3.6 | 0.1 | - |
| 1984 | 6.2 | 5.1 | 4.4 |

Source: British Petroleum Statistical Review, American Petroleum Institute

Table 26

Copeland, Wickersham, Wiley & Co.

## OPEC PRODUCTION CEILING VS. OPEC PRODUCTION CAPACITY
(Thousands of Barrels Per Day)

| OPEC Country | 16,000 Production Ceiling | 1984 Est. Production Capacity | Production Ceiling Volumes As a % of Capacity |
|---|---|---|---|
| Saudi Arabia | 4,353 | 11,300 | 39% |
| Iran | 2,300 | 3,000 | 77 |
| Iraq | 1,200 | 1,500 | 80 |
| Kuwait | 900 | 2,800 | 32 |
| U.A.E. | 950 | 2,920 | 33 |
| Qatar | 280 | 650 | 43 |
| Venezuela | 1,555 | 2,500 | 62 |
| Nigeria | 1,300 | 2,400 | 54 |
| Libya | 990 | 2,000 | 50 |
| Indonesia | 1,189 | 1,600 | 74 |
| Algeria | 663 | 1,100 | 60 |
| Gabon | 137 | 200 | 69 |
| Ecuador | 183 | 250 | 73 |
| Total | 16,000 | 32,220 | 50% |

Source: Petroleum Intelligence Weekly

Table 27

eland, Wickersham, Wiley & Co.

## OPEC PRODUCTION CEILINGS
(Amounts in Thousands of Barrels Per Day)

| Country | April 1982 17,500 Ceiling | Average 1982 OPEC Production | April 1983 17,500 Ceiling | Average 1983 OPEC Production | Oct. 1984 16,000 Ceiling | Average 1985 OPEC Production |
|---|---|---|---|---|---|---|
| Saudi Arabia | 7,150 | 6,450 | 5,000 | 5,085 | 4,353 | 3,388 |
| Iran | 1,200 | 1,964 | 2,400 | 2,426 | 2,300 | 2,192 |
| Iraq | 1,200 | 923 | 1,200 | 1,005 | 1,200 | 1,433 |
| Kuwait | 800 | 828 | 1,050 | 1,077 | 900 | 1,024 |
| U.A.E. | 1,000 | 1,214 | 1,100 | 1,147 | 950 | 1,203 |
| Qatar | 300 | 328 | 300 | 295 | 280 | 306 |
| Venezuela | 1,500 | 1,891 | 1,675 | 1.790 | 1,555 | 1,670 |
| Nigeria | 1,300 | 1,295 | 1,300 | 1,241 | 1,300 | 1,472 |
| Libya | 750 | 1,150 | 1,100 | 1,076 | 990 | 1,056 |
| Indonesia | 1,300 | 1,339 | 1,300 | 1,385 | 1,189 | 1.256 |
| Algeria | 650 | 702 | 725 | 675 | 663 | 631 |
| Gabon | 150 | 154 | 150 | 157 | 137 | 153 |
| Eduador | 200 | 209 | 200 | 236 | 183 | 277 |
| Total | 17,500 | 18,445 | 17,500 | 17,595 | 16,000 | 16,063 |

## OVERPRODUCTION (OR UNDERPRODUCTION) COMPARED TO CEILINGS
(Amounts in Thousands of Barrels Per Day)

| Country | Average 1982 OPEC Production | Average 1983 OPEC Production | Average 1985 OPEC Production |
|---|---|---|---|
| Saudi Arabia | (700) | 85 | (965) |
| Iran | 764 | 26 | (108) |
| Iraq | (277) | (195) | 233 |
| Kuwait | 28 | 27 | 124 |
| U.A.E. | 214 | 47 | 253 |
| Qatar | 28 | ( 5) | 26 |
| Venezuela | 391 | 115 | 115 |
| Nigeria | ( 5) | ( 59) | 172 |
| Libya | 400 | ( 24) | 66 |
| Indonesia | 39 | 85 | 67 |
| Algeria | 52 | ( 50) | ( 32) |
| Gabon | 4 | 7 | 16 |
| Ecuador | 9 | 36 | 94 |
| Total | 945 | 95 | 63 |

Table 28

Copeland, Wickersham, Wiley & Co.

## PETROLEUM EXPORT REVENUES - OPEC
(Billions of Dollars)

| Country | 1973 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 |
|---|---|---|---|---|---|---|---|---|---|
| Saudi Arabia | $ 7.8 | $ 37.8 | $ 57.5 | $102.3 | $113.2 | $ 76.0 | $ 47.8 | $ 46.8 | $ 28.0 |
| Iran | 5.6 | 21.7 | 19.1 | 13.3 | 9.3 | 19.0 | 19.9 | 12.9 | 13.8 |
| Iraq | 1.8 | 10.8 | 21.3 | 26.1 | 10.4 | 9.5 | 9.6 | 11.2 | 12.1 |
| Kuwait | 3.5 | 9.4 | 16.7 | 17.7 | 13.8 | 10.0 | 9.9 | 10.3 | 9.0 |
| U.A.E. | 1.7 | 8.6 | 12.9 | 19.4 | 18.7 | 16.0 | 12.9 | 12.3 | 11.2 |
| Venezuela | 4.3 | 8.7 | 13.5 | 18.2 | 17.4 | 16.5 | 13.8 | 12.1 | 12.5 |
| Nigeria | 2.9 | 9.5 | 16.6 | 24.5 | 16.7 | 14.0 | 10.2 | 12.6 | 12.9 |
| Libya | 3.5 | 9.7 | 15.2 | 20.4 | 15.3 | 14.0 | 11.3 | 11.1 | 9.4 |
| Indonesia | 1.6 | 7.4 | 8.9 | 15.6 | 14.4 | 11.5 | 13.5 | 11.5 | 10.0 |
| Algeria | 1.5 | 5.9 | 7.5 | 12.6 | 10.7 | 8.5 | 9.4 | 9.2 | 8.6 |
| Others | 1.2 | 3.6 | 6.0 | 8.7 | 7.8 | 6.9 | 5.8 | 7.1 | 5.9 |
| Total OPEC | $ 35.4 | $133.3 | $195.2 | $278.9 | $247.7 | $201.9 | $164.1 | $157.4 | $133.4 |

Source: OPEC and International Monetary Fund

Table 29

Copeland, Wickersham, Wiley & Co.

## PETROLEUM EXPORT REVENUES - OPEC - ESTIMATED FOR 1986
## ASSUMING VARIOUS PRICE LEVELS

| OPEC Country | Production Ceiling (1000 b/d) | Projected Annual Revenues (Billions of Dollars) $15/bbl | $20/bbl | $25/bbl | $27.50/bbl |
|---|---|---|---|---|---|
| Saudi Arabia | 4,353 | $23.8 | $31.8 | $39.7 | $43.7 |
| Iran | 2,300 | 12.6 | 16.8 | 21.0 | 23.1 |
| Iraq | 1,200 | 6.6 | 8.8 | 1.0 | 12.0 |
| U.A.E. | 950 | 5.2 | 6.9 | 8.7 | 9.5 |
| Kuwait | 900 | 4.9 | 6.6 | 8.2 | 9.0 |
| Qatar | 280 | 1.5 | 2.0 | 2.6 | 2.8 |
| Venezuela | 1,555 | 8.5 | 11.4 | 14.2 | 15.6 |
| Indonesia | 1,189 | 6.5 | 8.7 | 10.8 | 11.9 |
| Nigeria | 1,300 | 7.1 | 9.5 | 11.9 | 13.0 |
| Libya | 990 | 5.4 | 7.2 | 9.0 | 9.9 |
| Algeria | 663 | 3.6 | 4.8 | 6.0 | 6.7 |
| Ecuador | 183 | 1.0 | 1.3 | 1.7 | 1.8 |
| Gabon | 137 | 0.8 | 1.0 | 1.3 | 1.4 |
| Total OPEC | 16,000 | $87.5 | $116.8 | $146.1 | $160.4 |

Table 30

Copeland, Wickersham, Wiley & Co.

## REAL OIL COSTS - 1980 DOLLARS - ADJUSTED FOR CURRENCIES
(Dollars Per Barrel)

| | Japan | West Germany | U.K. | United States |
|---|---|---|---|---|
| 1980 | $33.11 | $33.96 | $31.22 | $33.39 |
| 1981 | 35.46 | 42.48 | 36.93 | 33.59 |
| 1982 | 37.19 | 39.60 | 37.84 | 29.98 |
| 1983 | 31.75 | 37.59 | 36.90 | 25.24 |
| 1984 | 30.56 | 39.43 | 38.12 | 24.24 |
| 1985 | | | | |
| 1st Qtr. | 32.13 | 42.62 | 42.05 | 22.84 |
| 2nd Qtr. | 31.09 | 40.04 | 36.78 | 22.94 |
| 3rd Qtr. | 29.22 | 35.61 | 33.25 | 22.79 |
| November | 25.45 | 32.06 | 31.12 | 23.19 |

Source: Petroleum Intelligence Weekly

Table 31

Copeland, Wickersham, Wiley & Co.

## "REAL" OIL PRICES - ADJUSTED FOR CURRENCIES - 1972 DOLLARS

(Dollars Per Barrel)

| | Nominal Prices | West Germany | Japan | United States |
|---|---|---|---|---|
| 1972 | $ 2.70 | $ 2.70 | $ 2.70 | $ 2.70 |
| 1973 | | | | |
| 1st Qtr. | 3.05 | 2.40 | 2.36 | 2.93 |
| 4th Qtr. | 7.00 | 5.50 | 5.42 | 6.19 |
| 1974 | 12.92 | 8.68 | 8.18 | 9.62 |
| 1975 | 11.50 | 7.01 | 7.18 | 7.83 |
| 1976 | 13.14 | 7.91 | 7.80 | 8.55 |
| 1977 | 14.31 | 7.73 | 7.55 | 8.77 |
| 1978 | 14.22 | 6.57 | 6.04 | 8.09 |
| 1979 | 31.75 | 12.77 | 13.09 | 16.06 |
| 1980 | 37.87 | 14.05 | 13.71 | 16.77 |
| 1981 | 36.64 | 15.67 | 12.72 | 14.87 |
| 1982 | 31.76 | 13.78 | 12.24 | 12.63 |
| 1983 | 28.73 | 12.92 | 10.79 | 11.29 |
| 1984 | 28.08 | 13.68 | 10.58 | 10.77 |
| 1985 | 27.42 | 13.51 | 10.41 | 10.51 |
| 1986 | | | | |
| January | 22.00 | 9.09 | 7.19 | 8.55 |
| February | 14.75 | 5.70 | 4.25 | 5.73 |

Source: Petroleum Intelligence Weekly

Table 32

Copeland, Wickersham, Wiley & Co.

## "W" COMPANY
## LOAN VALUE ANALYSIS

| Case | Future Net Income ($Millions) | Present Value 12% Discount Rate ($Millions) | Loan Value ($Millions) | Reserves |
|---|---|---|---|---|
| $2.50/MCF Gas<br>$20.00/bbl. Oil | 41.3 | 25.1 | 12.6 | 209 Billion cubic ft.<br>2.0 Million barrels |
| $2.25/MCF Gas<br>$15.00/bbl. Oil | 32.5 | 19.7 | 9.7 | |
| $2.00/MCF Gas<br>$10.00/bbl Oil | 23.6 | 14.3 | 7.1 | |

- Future Net Income = Oil & Gas Revenues - Lease Operating Expenses - Production Taxes - Investment.
- Future Net Income does not reflect General & Administrative costs necessary to supervise operations.
- All figures are before federal income tax.

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MAR 28 AM 7 50

March 25, 1986

The Honorable J. Bennett Johnston
136 Hart Building
Washington, D.C. 20510

Dear Senator Johnston:

As a follow-up to my testimony before the Senate Committee on Energy and Natural Resources, I thought you might be interested in some additional information that we were unable to provide because of the need to shorten the presentation.

We have tried to determine the level of imports (crude and refined products) that could be expected by 1990. Based on a $15 per barrel average crude price and 2% per year oil demand growth, we estimate that the U.S. would be importing about 63% (10.9 million barrels per day) of our oil consumption in 1990. If however, oil demand rose at a 3% annual rate, imports would be 12.1 million barrels per day of 67% of total domestic oil consumption. Those forecasts compare with 5.2 million barrels per day or 33% of domestic consumption in 1985 (see attached table).

Based on the capital spending reductions of $9 billion to date by 15 large oil companies, we estimate that approximately 1 billion barrels of reserve additions have been lost as a result of those expenditure cuts. Based on our annual domestic production of 3.2 billion barrels per year, the absence of those reserve additions, i.e., 1 billion barrels, is significant. Lower expenditures and reduced reserve additions will inevitably lead to rising imports, and consequently, significantly higher OPEC oil prices.

Sincerely,

Jack

Jack L. Copeland
Chairman

JLC/sl
Attachment

Copeland, Wickersham, Wiley & Co.

### U.S. IMPORTS - BASED ON $15/BBL OIL
### (Amounts in Thousands of Barrels Per Day)

| | | | | No Stipper Production (a) | | | |
|---|---|---|---|---|---|---|---|
| Year | U.S. Oil Demand | Imports | Imports As % of Demand | 2% Demand Growth/ Imports | Imports As % of Demand | 3% Demand Growth/ Imports | As % of Demand |
| 1973 | 17,321 | 6,256 | 36% | | | | |
| 1974 | 16,666 | 6,112 | 37 | | | | |
| 1975 | 16,335 | 6,056 | 37 | | | | |
| 1976 | 17,479 | 7,313 | 42 | | | | |
| 1977 | 18,447 | 8,787 | 48 | | | | |
| 1978 | 18,862 | 8,202 | 43 | | | | |
| 1979 | 18,531 | 8,392 | 45 | | | | |
| 1980 | 17,000 | 6,830 | 40 | | | | |
| 1981 | 16,085 | 5,995 | 37 | | | | |
| 1982 | 15,254 | 5,113 | 34 | | | | |
| 1983 | 15,134 | 5,051 | 33 | | | | |
| 1984 | 15,640 | 5,442 | 35 | | | | |
| 1985 | 15,605 | 5,200 | 33 | | | | |
| 1986 | | | | 7,330 | 46% | 7,486 | 47% |
| 1987 | | | | 8,171 | 50 | 8,491 | 51 |
| 1988 | | | | 9,123 | 55 | 9,615 | 56 |
| 1989 | | | | 10,030 | 59 | 11,279 | 64 |
| 1990 | | | | 10,897 | 63 | 12,146 | 67 |

(a) Assumed to be 1.249mm b/d.

Senator **Hatfield**. Thank you, Mr. Copeland. You have stayed right on the time that now gives the other gentlemen an opportunity to be heard.

Mr. Lamm, we are happy to hear from you, as president of the Highway Users Federation, and I will give you a signal at the end of your allotted time, to provide for Mr. Donohue and Dr. Cooper.

## STATEMENT OF LESTER P. LAMM, PRESIDENT, HIGHWAY USERS FEDERATION

Mr. **Lamm**. Thank you, Mr. Chairman. I appreciate the opportunity to summarize the statement, and I assure you, I will.

The Highway Users Federation represents roughly 400 companies, associations and industry groups around the country, all of whom share a single trait. They are among the chief users and chief beneficiaries of better transportation through highways.

The Federation feels a tax on imported oil is a bad idea for the following reasons. I will summarize these reasons, some of which you have heard before, and I won't repeat the ones you had heard before.

Higher gasoline prices will immediately result. A $10 per barrel tax on imported oil will be fully passed through to consumers and would boost the price of gasoline by 24 cents a gallon. That, in turn, would add $143 annually to the average cost of gasoline for a single motorist, $250 to the cost of heating the average oil burner-heated home, and that, in turn, would add roughly $11 billion to the cost of moving farm and manufactured goods by truck in the country.

Highway users, regardless of income, do not have the ability, to the opportunity to shift their use of petroleum to other fuels. During the last decade, the utility industry cut its use of oil by 75 percent, while the price of oil was increasing. Highway users do not have that option.

Some would feel that because the Federation is opposed to an oil import tax, that must mean that we would favor increasing direct fuel taxes on gasoline. We think there are equally compelling reasons why a higher gasoline tax hike at this time is a bad idea. It is an attractive target, we recognize, because a 1 cent per gallon increase brings in roughly $1 billion worth of revenue. But, gasoline is already one of the most heavily taxed essential commodities in the country.

Out of an average cost of $1.20 a gallon, such as we might pay in this area for super unleaded gasoline, normal taxes would range anywhere from 41 cents to 64 cents, depending on what part of the country that you are working in. By any standard, we believe gasoline pays its fair share right now.

In addition, Mr. Chairman, there are a number of inequities in gasoline taxes for deficit reductions, just as there would be for oil import fees. They are geographic inequities in that the rural traveler uses more per capita gallons of gasoline than urban residents do. That, in effect, would mean that we would be taking rural Americans roughly 62 percent higher than the urban family for the same benefit.

Geographically, also, consumers in the West would pay more than their regular share of a gasoline tax increase in that the western States have a much higher per capita use of gasoline. Oregon, for instance, average driver in Oregon uses 452 gallons of gasoline per year, whereas the average consumer in New York uses 268 gallons.

Economic inequities also cross the economic spectrum in that the poorest drivers would be the ones which would hurt the most in terms of the relative impact on their total income. We have figures that show that roughly 78 percent of Americans who earned less than $10,000 a couple of years ago were dependent on private automobiles to work.

The final reason that we feel neither the gasoline tax nor the oil import fee is warranted on highway transportation, is that we have not contributed to causing the deficit in the first place. The Highway Trust Fund which finances all of the Federal highway activities has always been in the black. It is required to have a positive balance by Congress. The balance right now is nearly $10 billion, funds that have been collected from highway users that have not been turned into improved highways.

At this point, we feel our financial house is in order and we should not, as highway users, be penalized for something that has happened externally.

In summary, I think we have offered a number of reasons why either or both a tax on imported oil, and/or a tax on gasoline for budget balancing purposes would be most counterproductive at a time when the Nation's economy is just now beginning to recover from the shock of oil supply problems in the 1970's.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Lamm follows:]

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Users Federation
FOR SAFETY AND MOBILITY

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Phillips Petroleum Co

Statement

of

Lester P. Lamm

President

# Highway Users Federation

before the

Senate Committee on Energy and
Natural Resources

opposing

# Energy Taxes

March 20, 1986

1776 Massachusetts Avenue N.W. • Washington D.C. 20036 • (202) 857-1200

Mr. Chairman and Members of the Committee, thank you for this opportunity to present to this Committee the Highway Users Federation's views on the implications of a tax on imported oil.

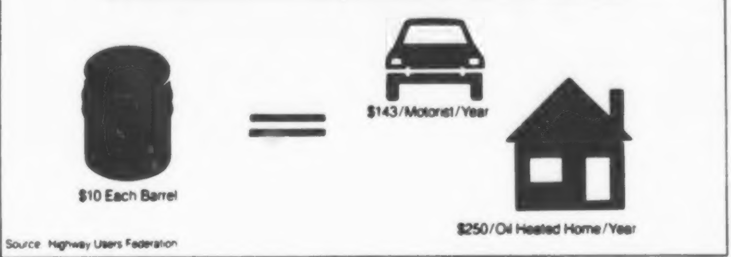
The Highway Users Federation (HUF) is a national coalition of businesses, industries, and associations working to make America's highway transportation system safer and more efficient. The Federation is the largest, most diversified organization of its kind in the nation. Our membership, composed of over 400 companies and industry associations, 63 state and local conferences, and 2,000 individual business men and women, represent the chief users of highways and the main providers of highway transportation products and services.

A tax on imported oil is a bad idea for the following important reasons:

- A tax on imported oil would mean higher gasoline prices and immediately higher costs for personal mobility, the movement of goods and the provision of many services. The Federation estimates that a $10 per barrel tax on imported oil, if fully passed through to consumers, would boost the price of gasoline by 24 cents a gallon.

It would add $143 annually to the cost of gasoline for the average motorist, and $250 to the cost of heating the average oil burner home. In addition, such a tax would add some $11 billion to the cost of moving farm and manufactured goods by truck in this country. Domestic consumers would pay most of this additional cost, and the rest would be added to the price of exports.

**CONSUMER IMPACT OF $10/BARREL IMPORT OIL TAX**

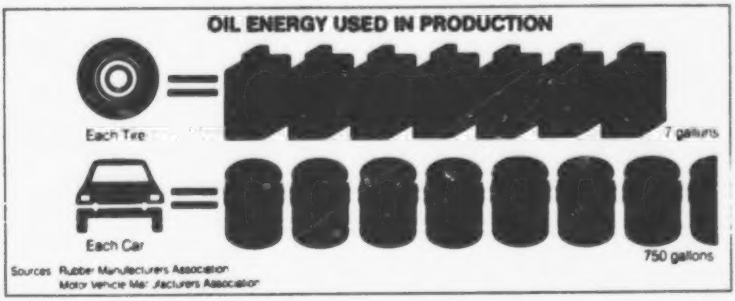


Source: Highway Users Federation

- Highway users, regardless of income, do not have the option of shifting to other fuels. The utility industry cut its use of oil by 75 percent as a result of the 1970's price increases, according to the National Coal Association. This economically sound response to fuel cost is not an option available to highway users -- they must use liquid fuel.
- Today's falling oil prices are contributing to America's economic resurgence. Less expensive oil

has a ripple effect throughout the economy, with a number of beneficiaries:

- the transportation sector has lower costs in moving people and goods to jobs and markets;
- the manufacturing sector benefits: for example in 1985, over 290 million tires were manufactured in the U.S., with each passenger car tire using about seven gallons of oil in its raw materials and production. A 3,700 pound automobile requires the energy equivalent of 750 gallons of oil in production according to a Department of Energy study;



OIL ENERGY USED IN PRODUCTION

Sources Rubber Manufacturers Association
Motor Vehicle Manufacturers Association

- agricultural production in the U.S. derives 76 percent of its energy from petroleum fuels.

* Higher oil prices, artificially boosted by an import tax, would have an opposite effect on the economy. A 1982 Congressional Budget Office study found

that a $10 per barrel oil import tax would reduce the real Gross National Product (GNP) by 1.4 percent and industrial production by 3.3 percent, while increasing unemployment by one-half percent.

- Taxing one essential commodity, like petroleum, for general government purposes, is risky tax policy, especially when the product is targeted simply because its price is dropping. In recent years, TV sets, computer chips, various items of wearing apparel, and other consumer products have declined in price, according to the Bureau of Labor Statistics. Yet no one proposes that such products be special targets for new taxes because the price is lower.

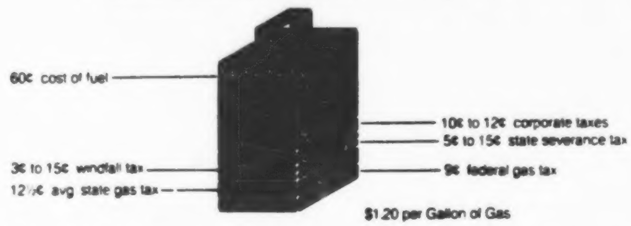
In addition to our concern over proposals to create an oil import tax, highway users are also concerned that another short-cut approach to budget-balancing -- a direct gasoline or motor fuel tax -- keeps reappearing in the popular press and in several bills pending in the Congress.

There are equally compelling reasons why a higher gasoline tax hike for deficit reduction purposes is bad idea:

- Gasoline is already one of the most heavily taxed essential commodities in the country. Based on national averages, total government revenue on a

$1.20 gallon of gasoline can range from 41 to 64 cents. This includes the 9 cent federal tax, state and local excise taxes averaging 12½ cents -- in some states it is as high as 18 cents -- state severance taxes that range from a nickel to 15 cents a gallon, windfall profits taxes that can add 3 to 15 cents; royalties, corporate income tax on refiners, and corporate payroll taxes that can add another 10 to 12 cents per gallon. By any standard, gasoline pays its share. Moreover, as gasoline prices drop, the taxes become a larger and larger part of the consumer cost.

**TOTAL TAXES ON A GALLON OF GASOLINE**

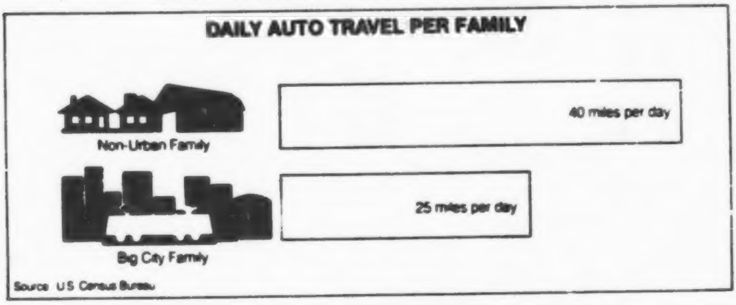


Source: American Petroleum Institute

* Proposals have been advanced which would establish variable motor fuel taxes. This would have the effect of placing a floor under the price the consumer pays at the pump. Highway users have traditionally supported a free market in motor fuel, even during the past decade when costs were going up

**and supplies were short. We will continue to resist such proposals which can only result in an artificially high consumer cost and which furthermore would have little prospect of adding to Federal revenues.**

- **There are major geographical inequities in a gasoline tax for deficit reduction, just as there would be for an oil import fee:**
  - **in non-urban areas with populations of under 5,000, each household generates just over 40 miles of auto travel daily. In large metropolitan areas with rail transit, per household travel is about 25 miles a day. Rural and small town Americans would thus be required to shoulder a 62 percent greater burden than those big city dwellers whose transit travel would not be taxed and is, indeed, heavily subsidized;**



DAILY AUTO TRAVEL PER FAMILY

Source: U.S. Census Bureau

- consumers in the West, who use more gasoline than the national average, would bear a disproportionate share of this financial burden. For example, Idaho has a per capita consumption of gasoline per year of 416 gallons, while New York's consumption per capita is only 268 gallons. In Texas, the consumption is 520 gallons; in Pennsylvania it's only 362 gallons -- 30 percent less fuel used and hence 30 percent less contribution to the nation's deficit reduction.

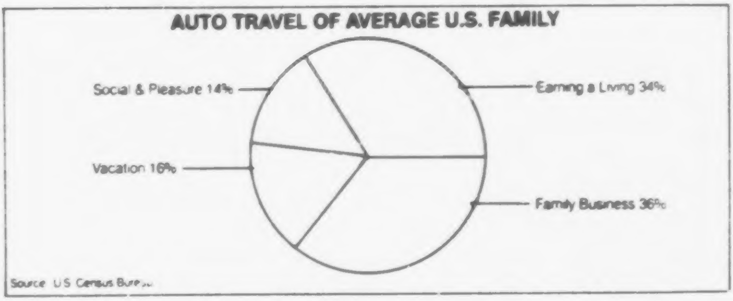
**Gasoline Use Per Capita**

| State | Gasoline Use per capita (Gallons) | Tax Rate 12-31-1984 (Cents/gal.)* | State | Gasoline Use per capita (Gallons) | Tax Rate 12-31-1984 (Cents/gal.)* |
|---|---|---|---|---|---|
| Wyoming | 658 | 17 | California | 442 | 18 |
| Nevada | 538 | 21 | Indiana | 439 | 20.1 |
| Georgia | 527 | 18.5 | Iowa | 437 | 22 |
| New Mexico | 522 | 20 | Maine | 437 | 23 |
| Texas | 520 | 19 | New Jersey | 436 | 17 |
| Oklahoma | 518 | 18 | Mississippi | 429 | 18 |
| Delaware | 511 | 20 | Michigan | 420 | 24 |
| Montana | 510 | 24 | Utah | 417 | 23 |
| Tennessee | 509 | 19 | Idaho | 416 | 23.5 |
| North Dakota | 496 | 22 | Ohio | 416 | 21 |
| Missouri | 495 | 16 | Connecticut | 415 | 24 |
| Arizona | 489 | 22 | Massachusetts | 394 | 20 |
| Arkansas | 474 | 18.5 | Wisconsin | 394 | 25 |
| South Dakota | 474 | 22 | West Virginia | 392 | 24.35 |
| Florida | 473 | 18.7 | Illinois | 380 | 21 |
| Kansas | 473 | 20 | Rhode Island | 379 | 22 |
| Louisiana | 472 | 25 | Pennsylvania | 362 | 21 |
| North Carolina | 471 | 21.25 | Hawaii | 309 | 17.5 |
| South Carolina | 471 | 22 | | | |
| Virginia | 466 | 22.83 | District of Columbia | 278 | 24.5 |
| Alabama | 463 | 22 | New York | 268 | 17 |
| Vermont | 458 | 22 | | | |
| Kentucky | 455 | 19 | Average | 433 | 21.0 |
| Minnesota | 454 | 25 | | | |
| Oregon | 452 | 11 | | | |
| Alaska | 451 | 11 | | | |
| Washington | 447 | 27 | | | |
| Nebraska | 446 | 23.7 | | | |
| Colorado | 444 | 21 | | | |
| Maryland | 443 | 22.5 | | | |
| New Hampshire | 443 | 23 | | | |

*Cents per gallon - State tax plus 9 cents federal (Additional taxes may be imposed in some states as sales taxes or as local government taxes)

*Source: Highway Users Federation*

- There are economic inequities in a gasoline tax for deficit reduction:
    - a look at daily vehicle miles of travel per household per $1,000 of income indicates that the lowest income families would pay 48 percent more than middle and upper income families. Preliminary estimates from the National Personal Transportation Survey indicate that in 1983 nearly 78 percent of Americans earning less than $10,000 per year commuted to work by private motor vehicles. These people would suffer most under regressive gasoline taxes because they have no alternative commuting mode.



AUTO TRAVEL OF AVERAGE U.S. FAMILY

Source U S Census Bureau

- Most household vehicles miles of travel (VMT) are not discretionary. The 1983 Nationwide Personal Transportation Study by the U.S. Bureau of the Census indicates that:
    - 34 percent of household VMT is work and work

related;

- 36 percent is for family business, shopping, medical, school, church trips;
- 16 percent is for vacations and visits to friends and relatives;
- only 14 percent is for social and pleasure driving.

A final inequity is that highway transportation has not contributed to the national deficit. The Highway Trust Fund is required by Congress to always have enough funds to cover expenditures. Our financial house is in order! The construction and maintenance of our nation's highways are financed by the users at the state and Federal level. At the Federal level in FY '86 the highway program's spending from its dedicated source -- the Highway Trust Fund -- was reduced $3 billion. Deferring the expenditure of $3 billion of highway user generated funds is a significant, and, we believe, sufficient contribution to reducing a deficit the highway program in no way caused.

Both a tax on imported oil and a tax on gasoline for budget balancing purposes are clearly counterproductive at a time when the nation's economy is finally recovering from the shock of foreign oil supply shortages in the 1970s. Either would exacerbate the U.S. trade deficit by making America's products less competitive in the world markets. Both are bad ideas whose time, we would hope, is about gone.

Senator Hatfield. Thank you, Mr. Lamm. I would like to take this particular occasion to indicate the important contribution that you gentlemen make and others who come before our committee to testify, not only in your opinions, but in the research data that you give to us. Your per capita data material here is invaluable. Mr. Copeland and all of you, your OPEC production statistics, your inventory statistics—in fact, I am not sure I would know where to go to find such data.

Those are also a very important part of testimony that the citizens provide the committees. We are very grateful for that.

Mr. Donohue, president of American Trucking Association.

## STATEMENT OF THOMAS J. DONOHUE, PRESIDENT AND CHIEF EXECUTIVE OFFICER, AMERICAN TRUCKING ASSOCIATIONS, INC.

Mr. Donohue. Thank you, Mr. Chairman.

Senator Hatfield. Nice to see you, again, Mr. Donohue.

Mr. Donohue. Very glad to be here. I will try to be as brief, or more than my colleagues. Simply stated, I am here today representing the Trucking Association and those bus and airline associations listed at the front of my statement.

We oppose an oil import fee because it discriminates against transportation, compared with other sectors of the economy. We all know, when and if we were to get one, it would have enough exclusions in it that that fee would press harder and harder on those organizations that I am here to speak for today.

The inequity of an oil import fee would be multiplied under the income tax revision plan being discussed in the Finance Committee at this time, which would eliminate the deductions for excise taxes and it would be a double whammy, so to speak.

The transportation sector represents approximately 20 percent of the GNP, but consumes 62 percent of the oil used in this country, and so you can see where the pressure would be.

In 1973 to 1981, the transportation companies and motorists had to cope with the rising cost of fuel and they made many investments, changed the courses of industries to accommodate that in terms of use of fuel, efficiency, light-weight manufacturing facilities, and so on. And now when we are able to begin to recoup that investment, and so to pay off the bank, so to speak, all of a sudden the spectre of filling the gap between the price of oil and the price at the pump comes before us and we reject it.

The overall economic effects of an oil import fee have been discussed by my colleagues. $10 a barrel not only would cost 24 cents a gallon, but it would cost this country between 300-400,000 jobs, and it would be a tremendous burden on the transportation industries and the trucking companies in particular.

I think that it is important for us to focus on why this matter is being discussed by the Congress at this time, this Committee and others. Is it to take care of a deficit problem? Is it to help a series of banks that are in trouble? Is it to help a large number of oil companies that now find themselves in a situation that is different than it was some months ago? I think a discussion of that, by your committee, will help us move in the direction of what is fair and equitable.

In summary, any form of an oil import fee, or other tax on oil and refined products would discriminate arbitrarily and unjustly against transportation. The taxes would clearly be inflationary, distortive and very, very complex. It would have in the long run a very minimal financial benefit, we believe.

We urge you to drop the proposal.

Trucking, for example, my final sentence, is the highest taxed industry in America. We are trying very hard to move in all sorts of directions to avoid that honor.

Thank you, very much, Mr. Chairman.

[The prepared statement of Mr. Donohue follows:]

BEFORE THE
UNITED STATES SENATE
COMMITTEE ON ENERGY
AND NATURAL RESOURCES

Statement of the
AMERICAN TRUCKING ASSOCIATIONS

HEARING ON
OIL IMPORT FEES

Thomas J. Donohue
President and Chief Executive Officer

My name is Thomas J. Donohue; I am President and Chief Executive Officer of the American Trucking Associations, the national federation representing all sizes and types of motor carriers.

My statement today has been endorsed as well by the following associations representing bus owners and airlines:

Air Transport Association of America
American Bus Association
National Air Carrier Association
Regional Airline Association
United Bus Owners of America

Not every transportation segment has an identical view on fuel taxes, but these groups are united with us in opposing an oil import fee. Some of them may submit their own statements for the record as well.

## SUMMARY

We strongly oppose imposition of an oil import fee. A fee would be extremely inequitable in its effects on different geographical areas, on transportation relative to other industries, and among firms within the transportation sector. The inequity would be multiplied under the income tax revision plan now being marked up by the Senate Finance Committee, which would eliminate business deductions for an oil import tariff or excise tax. A fee would raise consumer prices, since it would be reflected directly in the cost of consumer purchases of fuel and indirectly in many other goods and services. It would be an unstable and unreliable deficit reduction device. It would also be very complex once the inevitable exemptions for various producers and users were added.

## INEQUITIES

An oil import fee is a tax. For autos, it is equivalent to a gas tax; for trucks and buses, a diesel tax; for aircraft, an aviation fuel tax. A $10-per-barrel import fee, for example, adds roughly 24 cents to the price of each gallon of these fuels.

The fee has many of the same defects as taxes at the pump. It discriminates against different individuals, industries, and companies within the same industry.

Individual victims. An import fee discriminates against individuals based on their location, family size, and work status.

It penalizes motorists in Wyoming, for instance, who on average must drive more than double the distance driven by residents of New York or Washington, DC. Small-town and rural residents who do not have an option of public transportation are hit harder than city dwellers. Large families, which are more likely to require larger, hence less fuel-efficient, vehicles, also pay more. So do households in which the breadwinners must drive to work. All of these groups have less income on average than the consumers who would escape nearly unscathed: affluent, urban households with small families and small or no cars.

From an equity standpoint, these distributional effects make an oil import fee singularly unattractive. A Congressional Budget Office study estimated that in 1981 low-income households (below $7400) spent 8.2% of income on gasoline alone, while households at the top (over $36,900) spent just 3.7%. Thus any tax that increases the price of gasoline, as an import fee would do, is highly regressive.

Industry victims. An oil fee discriminates against transportation compared with other sectors of the economy. Fuel costs consume from 5 to 25% of operating costs for transportation companies. Fuel is an essential raw material in our businesses; in general, a firm must use more fuel if it is to grow. Unlike other users, such as utilities, motorists and transportation companies cannot shift to nonpetroleum fuels. Nor can they move production overseas, like some manufacturers.

All transport modes have achieved impressive gains in fuel efficiency, but they cannot avoid using oil. That is why the transportation share of oil use has risen steadily from 52% of all users in 1972 to over 62% today, even though unit fuel use has steadily dropped. Hence an import fee will burden transportation more than other oil-using sectors.

Besides transportation, many industries are harmed by a fee. These include recreational, travel, and lodging industries that depend on discretionary spending by consumers and are vulnerable to gasoline or airfare costs; manufacturers of petrochemicals and other petroleum-based products that compete in world markets with producers that do not face a new tax on oil; farmers and other users of petroleum products; domestic carmakers, whose products on average use more fuel than imports; banks and other businesses that sell or lend to countries whose oil sales would drop as a result of a fee.

These interindustry inequities would be compounded by a proposal that is part of the Senate Finance Committee's tax reform markup document. That plan would deny business an income tax deduction for tariffs and excise taxes. Such a ban would cover the oil import fees in all three bills introduced in the Senate. S. 1412 (Senator Hart) and S. 1507 (Senators Boren and Bentsen) impose the fee in the form of tariffs; S. 1997 (Senators Wallop and Bentsen) in the form of excises. Again, transportation would be hit the hardest, because fuel is such a large and inescapable cost of business.

Victims within transportation. A fee penalizes firms differentially within the transportation sector. Because of the types of products they haul or the distances they travel, the fuel efficiency of different fleets varies. For instance, aircraft or trucks that operate over long distances with few stops are inherently more fuel-efficient than short-haul/local ones. Trucks that carry heavy loads must burn more fuel than ones that operate often with light or empty loads. The ability of firms to pass on any portion of the fuel taxes to their customers varies as well, because some customers have greater market power or a wider choice of carriers or suppliers. As a result, a tax would fall arbitrarily on different firms in the same transport mode. By the same token, shippers and passengers would also be affected differentially.

## ECONOMIC AND FISCAL IMPACTS

One recent report estimates that a $10-per-barrel fee would cost the economy 300,000-400,000 jobs and 1% less growth in gross national product in the first year. The losses would occur not only in the specific industries cited above, but throughout the economy as consumers' disposable income dropped and as efficiency declined due to the price distortions of more costly oil products.

An oil import fee is bound to push producer and consumer prices higher than they would otherwise be. This is true whether the tax is imposed when crude oil prices are falling, stable or rising. In each case a fee of $10 per barrel is likely to push up fuel prices by 24 cents per gallon. With motor fuel representing 5.5% of the Consumer Price Index (CPI), such a hike means an immediate jump in the CPI of roughly 1.3%. The price level is likely to rise more as transportation companies, producers of other goods and services with a significant petroleum cost, and of fuels that compete with petroleum, pass on their higher costs to the extent market conditions permit.

These increases are one-time changes. But they trigger cost-of-living adjustments (COLAs) in wage contracts that can ignite a second round of price increases for some products. The tax would also force a larger COLA for social security and many other federal programs. The fiscal dividend would be pared still further by falling income tax collections from transportation and other companies that pay higher fuel costs and cannot pass the costs along. Meanwhile, with no offsetting increase in personal income, a jump in the CPI lowers personal income tax receipts by raising the floor on each bracket and personal exemption. Finally, conservation by motorists lowers highway fuel tax receipts. Thus, the fiscal benefit from an import fee is undermined and perhaps totally offset by declines in other revenues and by higher outlays.

The fiscal impacts can be summarized as follows:

DEFICIT EFFECTS OF OIL IMPORT FEE

| Revenue effects | Improves (+) or Worsens(-) Deficit |
|---|---|
| Direct revenue from fee | + |
| Windfall profits tax (due to higher domestic crude prices) | + |
| Individual income tax (due to indexing, GNP & job loss) | - |
| Social security tax (due to job loss) | - |
| Corporate income tax (oil industry +, all others -) | - |
| Existing fuel excise taxes (due to conservation) | - |
| **Outlay effects** | |
| Social security, other entitlements (due to higher CPI) | - |
| Unemployment, welfare benefits (due to job loss) | - |
| **Net effect** | ? |

## EFFECTS ON TRANSPORTATION BUSINESSES

Today, many companies in the trucking, bus, and airline businesses are operating on extremely narrow margins. So far, their fuel costs have declined far less than crude oil prices. For instance, the CPI for gasoline in February was still only 11% below its 1981 peak, even though crude oil prices are down by 50% or more. In any case, fuel savings have generally been eaten up by skyrocketing insurance premiums or passed along to passengers and shippers. An import fee could easily leave fuel prices higher than they are now, pushing some companies out of business. This result is even more likely if the fee is nondeductible under a "reformed" income tax. The resulting unemployment would worsen the fiscal picture even more, by cutting payroll and income tax receipts while adding to unemployment and welfare outlays.

A $10 fee would cost airlines $3 billion, roughly four times their 1985 profits. The same fee would cost the 2100 regulated trucking firms that reported results to the Interstate Commerce Commission in 1984 more than their total profit in 1984, their best year since deregulation.

S. 1507 and S. 1997 theoretically would remove the tax on oil once its price rose above a certain level. However, the recent history of tax legislation suggests that, once in place, the taxes would more likely be made permanent. Transportation users thus would be denied the benefits of falling prices while getting saddled with the burden of rising prices.

Transportation companies and motorists had to cope with rising fuel prices without government assistance from 1973 to 1981. They responded by making enormous investments in more fuel-efficient vehicles and aircraft--and suffered heavy losses in many cases. Now an oil fee threatens to rob them of the chance to achieve more normal rates of return and recoup those investments.

## COMPLEXITY

An oil import fee would not be enacted without exemptions. S. 1507, for instance, exempts home heating oil and fuel used in manufacturing goods for export. Exemptions for agriculture, nonprofit institutions, and governments are frequently suggested. So are exemptions for certain producing countries, notably Mexico, our largest supplier ( 7% of imports in 1985). Other producing nations are also in precarious financial shape or are equally strategic allies and would doubtless be given preferential treatment. (See Charts I and II for shares of oil usage by sector and imports by country.)

A justification can be offered for each of these exemptions. Yet each one adds to the complexity and the distortions inherent in an oil import fee. Each one also narrows the tax base, leaving transportation carrying more of the burden.

## CONCLUSION

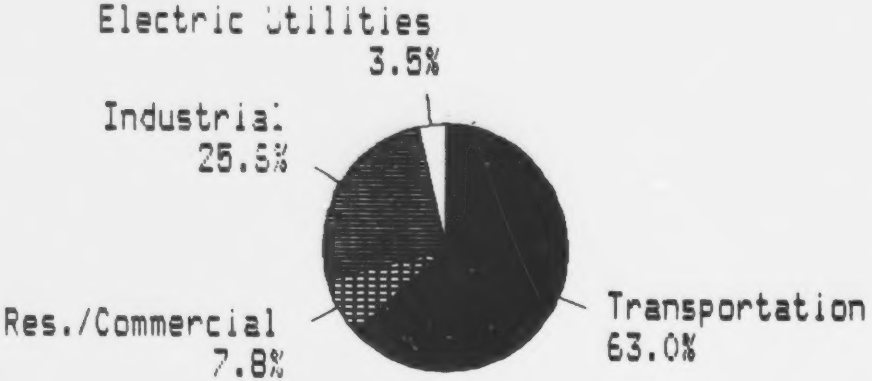
I have emphasized the very substantial negatives of an oil import fee for transportation as a whole. Let me close on behalf of my industry, trucking, by warning against the obvious alternative to an oil import fee: a gas tax. (The trucking industry's objections to a gas tax are shared by United Bus Owners of America.)

A gas tax, whether limited strictly to gasoline or applied to all highway fuels, would be extremely damaging and unfair to the trucking industry and many highway users. As noted, a $10-per-barrel tax on imported refined products would be equivalent to a 24-cent-a-gallon tax on gasoline and diesel. But a highway fuel tax would concentrate the burden even more on only one form of transportation, creating a great competitive disadvantage as well as an absolute cost increase for trucks. It would be grossly unfair to single out one industry to pay such a large share of a tax burden. That is particularly true for trucking, which pays the highest effective federal corporate income tax rate and contributes to deficit reduction through payments to the Highway Trust Fund. (The Fund currently has a $13 billion balance, which is helping to reduce the deficit.)

In summary, any form of oil import fee or other tax on oil and refined products would discriminate arbitrarily and unjustly against a variety of individuals and businesses, particularly in transportation. These taxes would be inflationary, distortive, and complex, and would provide minimal fiscal benefits at best. I urge you to drop any such proposals from further consideration.

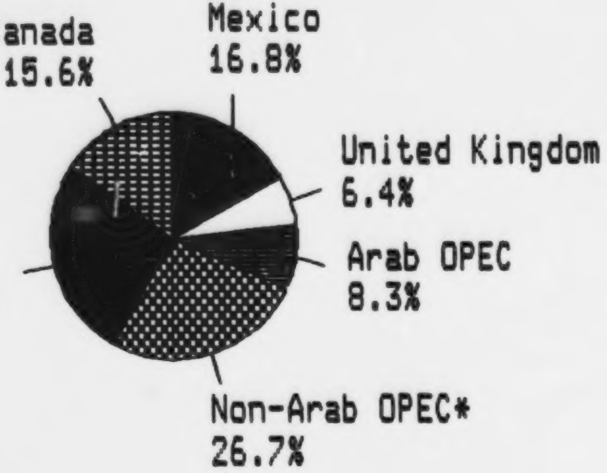
CHART I

Petroleum Consumption by End-User - Jan. 1985 thru Nov. 1985



Source: U.S. Department of Energy

## 1985 - Crude Oil and Petroleum Product Imports (By Country)



Source: U.S. Department of Energy

* Includes Indonesia, Iran, Nigeria, Venezuela, Ecuador and Gabon

** Includes Bahamas, Netherlands Antilles, Trinidad and Tobago, Puerto Rico and Virgin Islands

CHART II

Senator **Hatfield**. Thank you, Mr. **Donohue**.

Mr. Van Arsdall.

## STATEMENT OF R. THOMAS VAN ARSDALL, VICE PRESIDENT, AGRICULTURAL INPUTS AND SERVICES, NATIONAL COUNCIL OF FARMER COOPERATIVES

Mr. **Van Arsdall**. Thank you, Mr. Chairman. Our testimony today briefly portrays a twofold message. First, while an oil import fee, when considered in an isolated context, may be ill-advised energy policy. The National Council believes that the specific objectives in the mechanics of any proposal must be made available and judged within the real world parameters presently prevailing; most notably, critical deficit reduction needs, and the national security implications of collapsing world oil prices and their impact upon the domestic oil industry, before any responsible policy determinations can be achieved. We are early in that debate.

Our membership has conveyed to us their view of the overriding importance to American agriculture of accomplishing significant reductions in the national deficit. As we look at any options in any part of the debate, energy or otherwise, that is our overriding consideration.

Second, since rising petroleum product imports potentially carry grave implications for the security of American agricultures, fuel supplies, and future emergencies, and indeed, our national and economic security. The National Council would urge that a differential on imported petroleum products be incorporated as part of any oil import fee that might be considered.

Our position on the product differential is based not simply on the survival of the domestic refining industry, nor for our trade considerations. Rather, it is based more upon a concern that if product imports continue to increase, displacing domestic refining capacity, a threshold will be crossed at some point which would place our Nation under the threat of a new kind of vulnerability, jeopardizing the effectiveness of the Strategic Petroleum Reserve in the next emergency, a crude oil reserve that the members of this committee and the National Council have worked long and hard to create.

In this regard, the precipitous fall in world oil prices carries with it a number of implications, as well as new questions. First, it appears that product import, national security concerns, are being pushed into the background by more immediate concerns about the impact of falling oil prices on the domestic petroleum industry.

Second, it is unclear how lower low oil prices impact upon foreign governments' willingness or ability to subsidize their export refineries, at least in the short term.

Third, a tight market is likely to return more quickly as demand accelerates and exploration and production diminish on domestic and international scenes. The National Council would hope that the product imports issue does not become lost in the snowstorm, so to speak, but more immediate concerns created by falling oil prices, and that this issue will continue to receive the closest possible scrutiny.

In closing, member cooperatives of the national council are farmer owned. We have endured through two oil emergencies, the farm fuel shortages, and sharply higher prices. We are not anxious to see mistakes of the past repeated needlessly in the foreign oil cutoff.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Van Arsdall follows:]

Before the Senate Committee on Energy and Natural Resources
Hearing on Oil Import Fee
March 20, 1986

Statement of
R. Thomas Van Arsdall, Vice President, Agricultural Inputs and
Services, National Council of Farmer Cooperatives

Mr. Chairman and Members of the Committee, my name is R. Thomas Van Arsdall and I am Vice President of Agricultural Inputs and Services with the National Council of Farmer Cooperatives. I commend the Committee for holding this timely hearing on a very important issue, and I am pleased to have the opportunity to share the National Council's views. Our testimony today portrays a two-fold message:

- **First, while an oil import fee when considered in an isolated context may be ill-advised energy policy, the National Council believes that the specific objectives and mechanics of any proposal must be made available and judged within the real-world parameters presently prevailing--(1) critical deficit reduction needs, and (2) the national security implications of collapsing world oil prices and their impact upon the domestic oil industry before any responsible policy determinations can be achieved.**

- **Second, since rising petroleum product imports carry grave implications for the security of U.S. agriculture's fuel supplies in future emergencies, and indeed our national and economic security, the National Council would urge that a differential on imported petroleum products be incorporated as part of any oil import fee that might be considered.**

The product imports issue might well have been more appropriately addressed in the March 14 hearing on the World Outlook and Situation for Petroleum. However, any discussion of oil import fees from an energy policy perspective must include careful consideration of how product imports are to be treated.

## INTEREST OF THE NATIONAL COUNCIL

The National Council of Farmer Cooperatives is an association of cooperative businesses which are owned an controlled by farmers. Our membership includes 97 major marketing and farm supply cooperatives, the 37 banks of the Farm Credit System, and 33 state councils of farmer cooperatives. National Council members handle practically every type of agricultural commodity produced in the U.S., market these commodities domestically and around the world, and furnish production supplies and credit to their farmer members and patrons. Five out of six U.S. farmers are affiliated with one or more cooperatives. The National Council represents about 90 percent of the nearly 5,800 local farmer cooperatives in the nation, with a combined membership of nearly two million farmers.

The National Council has been heavily involved in national policy debate concerning energy emergency preparedness for the past 13 years. Our commitment to the development and maintenance of responsible emergency preparedness policies hinges upon a fundamental relationship which underlies agriculture's unique ties to its energy inputs. Simply stated, U.S. **agriculture must have uninterrupted access to equitably-priced supplies of petroleum fuels**, in order to assure dependable supplies of food and natural fiber for the nation and the world.

Timing is critical in agricultural operations, with needs subject to the dictates of biological processes and the vagaries of nature. Agriculture, as opposed to industrial operations, cannot make up for lost production at a later date. A disruption of even short duration at the wrong time can result in crop losses for an entire year. Yet agriculture is perhaps most vulnerable to disruptions, as it lies at the end of petroleum supply lines. Past disruptions have been felt first and most acutely in rural areas.

It is this **combination of need and vulnerability** that led farmers, through their cooperatives, to **invest in their own petroleum supply and distribution systems** over the past half century. Today, supply cooperatives own and operate five efficient refineries possessing an aggregate production capacity of 348,283 barrels per stream day. Farmer cooperatives market petroleum products in more than 40 states and supply about 40% of all on-farm fuel and a large portion of rural system needs.

The cooperative petroleum system represents the only segment of the oil industry in which the **consumers of its products are also its owners.** This feature carries with it not only a **unique accountability** in terms of commitment of supply, service and price, but also a **unique institutional perspective and sensitivity**--borne of the painful experiences of two oil supply disruptions --to this nation's energy security.

Cooperatives are not "Johnny-come-latelies," as they have been in the petroleum supply business on behalf of their farmer-members for about 50 years. They have weathered a lot of crises during that half century, and have made the additional investments necessary in response to the dictates of a volatile market environment. During the past two disruptions, cooperatives were there when the farmer needed them. Cooperatives have clearly demonstrated that they are among the most reliable fuel suppliers to farmers through both bad times and good.

## OIL IMPORT FEE

It is relatively simple to come forth with a position on oil import fees when considered in an isolated context, strictly within the confines of energy policy during "normal times"--it is a bad idea.

Yet, these are far from "normal" times. The oil import fee currently is being discussed as a revenue-raising measure within the context of both tax reform and the critical need to reduce this nation's deficit. Furthermore, the current collapse in world oil prices has sparked growing debate over whether an oil import fee should be imposed as a means of maintaining the integrity of the U.S. petroleum industry as a whole, largely for national security reasons. Thus, the merits of an oil import fee will not be debated solely within the confines of energy policy in the coming months.

The National Council has consistently maintained over the years that an oil import fee, per se, does not represent sound energy policy. Indeed, the Delegate Body just reaffirmed this view at the National Council's 57th Annual Meeting in January. The Policy Resolution states in part:

> "The National Council is philosophically opposed to narrowly based energy taxes, such as an oil import fee, as a means of raising revenues to meet general needs....Taxing policy of

> this nature adversely affects the energy industry, farmers and other consumers."

However, the National Council's Delegate Body also stressed the overriding importance to American agriculture of accomplishing significant reductions in the national deficit, as indicated in another Policy Resolution dealing with sound fiscal and monetary policy, as follows:

> "Recognizing the importance of sound fiscal and monetary policy, NCFC continues to strongly support efforts to move toward the goal of a balanced budget; provided, however, that agriculture is not unfairly singled out or asked to bear a disproportionate share of any proposed reductions, particularly at a time of great economic stress for many farmers."

In recognition of competing priorities, as well as the complex factors involved, the National Council's Policy Resolution on oil import fees/ energy taxes goes on to provide two important caviats. First, while stating philosophical opposition to new energy taxes, it also recognizes the overriding importance of reducing the budget deficit:

> "...except to the extent that such taxes are deemed essential to move toward the goal of a balanced budget."

Second, the Delegate Body urged that any oil import fee implemented for revenue reasons be designed in such a manner that it incorporates sound energy policy and national security considerations to the extent practicable:

> "Should any energy tax be imposed, it should also be constructed to achieve energy policy and national security objectives."

At this stage in the current debate, it is far from clear for what policy objectives an oil import fee might be implemented, or how it might be structured. Therefore, the National Council must reserve judgment, and defers taking any position until such time as a specific proposal is laid on the table, so that the merits and demerits may be closely scrutinized.

## PRODUCT DIFFERENTIAL

Clearly, imposition of a crude oil import fee without an equivalent fee on imported product would be disastrous for U.S. refiners and invite wholesale displacement of domestic refining capacity by product imports. Less clear, however, are the inherent dangers of levying identical fees on both imported crude and product. Other witnesses, including the Independent Refiners Coalition and the American Independent Refiners Association, have capably demonstrated the complex of factors which provide foreign refiners with unfair cost advantages. First, even absent an oil import fee, domestic refiners are disadvantaged through significantly higher environmental compliance costs, including those associated with lead phasedown. Second, this disadvantage is compounded by an oil import fee, absent a product differential, due to higher fuel costs and working capital costs for inventory forced upon domestic refiners.

For these reasons, the National Council believes that if any **oil import fee is implemented, it should be structured so as to include an appropriate differential on refined product imports.**

For the purposes of this hearing, the remainder of the National Council's testimony addresses in greater detail the refined petroleum product imports issue from a national security perspective, and why it must be included in any energy policy debate--including that now occurring on import fees.

## LESSONS FROM THE PAST

History has demonstrated that a relatively minor supply disruption can generate long gasoline lines, crisis-driven price increases and devastating macro-economic consequences. For example, during the Iranian disruption in 1979, there was no actual decrease in the U.S. level of crude oil imports. Yet inventory adjustments reflecting perceived shortages led to supply disruptions and a 180-percent increase in crude oil prices.

It is estimated that the adverse economic effects of the 1979 disruption alone resulted in oil price increases that forced farmers to pay as much as $5 billion more annually for their petroleum fuels through 1983.

## SPR RESPONSE

The U.S. has responded to two damaging crude oil disruptions over the past decade by moving to fill the Strategic Petroleum Reserve (SPR) with nearly 500 million barrels of crude oil to date. The National Council has been and continues to be an outspoken advocate of diligence in filling the SPR, and in developing policies for its timely and effective use. We appreciate the tireless leadership demonstrated by the Chairman and certain other members of this Committee over the past several years toward the same objectives.

The U.S. Department of Energy (DOE) has stated that, at current levels of petroleum imports, the SPR now has sufficient crude oil inventory to offset a total cutoff of petroleum imports for more than 90 days. However, U.S. consumers require petroleum products--gasoline, diesel fuel, heating oil--not crude oil. To risk overstating the obvious, refineries are necessary to accomplish that conversion.

## PRODUCT IMPORTS--A NEW VULNERABILITY?

The National Council is growing increasingly concerned that the ability of this nation to deal with future energy emergencies could be diminished significantly as a result of rising petroleum product imports. An analysis of import data over the last four years demonstrates an accelerated growth in imports of both finished and unfinished petroleum products, particularly gasoline. The fact that new refineries are coming on stream in oil producing nations, with others under construction or planned, makes it likely that this trend will continue.

Increasing product imports may contribute to downward pressure on fuel prices in the short term. Any derived fuel cost savings, when examined in isolation, certainly represent welcome news to hard-pressed farmers. However, closer assessment within a larger context identifies potential short-run and long-run costs to agriculture of much greater magnitude, particularly in a tight or disrupted market.

### Product Imports Adversely Impact U.S. Refiners:

To the extent that product imports exacerbate the current depression in the domestic refining industry, farmer-owned cooperative refineries are also impacted. The refining sector, both U.S. and worldwide, has been going through an extremely difficult adjustment period, in which surplus capacity has been shut down in order to reach a new equilibrium of supply and demand. More recently, refiners have been forced to absorb major new losses in the form of inventory devaluations due to rapidly falling world oil prices.

A steadily growing volume of petroleum product imports has exacerbated this adjustment process for the U.S. refining sector. For a number of reasons U.S. refiners do not have access to product export markets, while the U.S. represents the most lucrative market for petroleum products in the eyes of overseas refiners. Foreign governments have not hesitated to subsidize products from their "national" refineries in order to penetrate the U.S. market.

### Implications for Co-op Petroleum System:

Major oil companies are able to offset refining losses for considerable periods through their earnings from crude oil production and other investments. Cooperative refiners, as independents, by definition are crude deficient and generally do not have other earnings with which to weather such refining losses. The agricultural economy is going through its own severe economic crisis, and certainly has no reserves from other sources to offset refining losses.

The National Council would point out that farmer-owned cooperative refiners are not competitively disadvantaged because of technological obsolescence, inefficiency or low productivity. These refineries have high yields of gasoline, diesel fuel and heating oil amounting to 85-90 percent of their refined products, and have invested millions of dollars to maintain efficient operations. Cooperative refiners on average are more efficient than the norm for major refiners, in both fuel efficiency and cash operating costs.

Regional cooperatives which have been hard hit in other areas can ill afford concurrent losses in their refining operations. In the extreme, this could mean a shutdown of one or more cooperative refineries. A total of $675 million in cooperative refinery assets (hardware only) is potentially at risk. The impact of a major write-off could be devastating for economically weakened cooperatives and their farmer-owners.

Furthermore, if the product import trend continues and cooperative refineries are forced to shut down, then the traditional role of cooperative refiners as a principal source for the cooperative marketing and distribution system in rural areas would be replaced by dependence on imported products and a volatile spot market. These sources dry up during a shortage.

Major oil companies are not well positioned to fill the void, as they have continued a selective withdrawal from rural America for economic reasons. Indeed, there is real question as to whether SPR crude oil could be refined and moved to all rural markets on a timely basis during an emergency, absent the cooperative refining system.

If cooperative petroleum marketers, and in turn their farmer-members, were to lose part or all of their fuel supplies in the next oil emergency, a fuel shortage could quickly disrupt the complex food production and distribution system.

## WILL PRODUCT IMPORTS REDUCE SPR EFFECTIVENESS?

One critical question has emerged which goes far beyond the issue of the survival of the domestic refining industry, and which demands serious debate within the nation's energy policy community:

- **Will petroleum product imports displace sufficient domestic refining capacity to jeopardize the effectiveness of the SPR?**

Regardless of the causes underlying increasing product imports, the National Council is concerned that should product imports continue to increase, the trend could lead to an over-dependence on imported products--creating a **new kind of vulnerability** that could again result in gasoline lines and disruption-driven price shocks in the next emergency.

Disruptions in the past have curtailed crude oil supplies. Supply disruptions of the future may also cut off finished petroleum products used in agriculture, transportation, home heating, industry and defense. The SPR could still be utilized effectively in response to either type of disruption, assuming that sufficient domestic refining capacity is available and positioned to serve all market segments.

## THE ISSUE OF "FAIR" TRADE

If the economic survival of an American industry in the face of foreign competition were the only issue being debated, then one could argue--as some have--that the problem should be addressed solely under trade remedies. Then the burden would be similar to that presently faced by a number of other U.S. industries: proving whether the root cause of the threat involves "unfair" trade practices by foreign competitors.

In the case of the refining industry, the particular problem would involve the use of dual pricing of crude oil by governments in producing nations as a natural resource subsidy for export products from their refineries. At stake would be jobs and the investment base of an important cog in our national economy--certainly no small consideration. As stated earlier, farmer cooperatives and their member-owners have a great deal at risk in this regard. And we are convinced that unfair trade practices by foreign governments have contributed materially to the skewed pricing structure which has led to increased petroleum product imports penetrating the U.S. market.

However, in the case of this nation's oil supply lines, the debate must transcend the traditional arguments regarding whether the practices of foreign competitors are "fair" or "unfair". In no other industry have we experienced two foreign embargoes which curtailed a resource so vital to our economic and national security. In no other industry did such actions result in an 800-percent increase in prices, perpetuated by the presence of a cartel.

Should product imports reduce the ability of domestic refiners to convert domestic and SPR crude oil to needed products in the event of a future emergency, it will matter not why the displacement of domestic refining capacity occurred.

## COMPELLING QUESTIONS DEMAND ANSWERS

Will petroleum product imports displace sufficient domestic refining capacity to jeopardize the strategic effectiveness of the SPR in the next emergency? The National Council believes that available data, while not providing all of the answers, certainly raise serious cause for concern. The potential stakes are so high that this question deserves the fullest investigation by this Committee and other appropriate policy bodies in government. Indeed, the National Council's Board of Directors, when addressing this issue in a meeting last year, was so concerned that it unanimously adopted the Resolution provided as Enclosure 1.

We must not let time dull our senses. Although not currently in the headlines, the national energy security threat remains real and omnipresent. Experts generally agree that a supply disruption is likely to occur at sometime in the future. The only points still at issue are "When" and "How severe." Current increases in petroleum demand in consuming nations are projected to continue, with a tight market expected to return within a few years.

Political instabilities in major oil producing nations have by no means diminished and are expected to continue as the norm. It is only a matter of time before OPEC will again have effective control of the incremental barrel.

The collapse of crude oil prices and the product import trend remind us once again that the world we live in is a dynamic and complex system with one ominous constant--**change**. Petroleum product imports represent a **new factor** in the emergency preparedness equation, which possesses the potential capability of limiting the SPR as a strategic insurance policy.

**Will the U.S. again turn a blind eye to emerging problems, reacting to a crisis only after the fact, typically with too much of the wrong solution?** It would be a senseless tragedy if this nation were to turn to the SPR in a future emergency and find it to be rendered ineffective. This scenario could easily be realized if strategic planning remains static in the midst of a rapidly changing environment.

The nature and source of petroleum product imports make it difficult, if not impossible, for cooperatives to cope with this new challenge in a business sense. The growing threat is principally from government-owned industry operating in non-market economies, the decision process extends beyond economic factors. When government-owned oil companies are able to price petroleum products below the cost of crude oil for considerable lengths of time in order to penetrate our markets, how in the world can cooperative businesses in rural America be expected to compete?

**How does the precipitous fall in world oil prices impact upon these concerns?** This new development carries with it a number of implications, as well as new questions. First, it appears that product import national security concerns are being pushed into the background by immediate concerns about the impact of falling oil prices on the petroleum industry. Second, it is unclear how lower oil prices impact upon foreign governments' willingness or ability to subsidize their refineries, at least in the short term. Third, a tight market is likely to return more quickly, as demand accelerates and domestic exploration and production diminish.

The National Council would hope that the product imports issue does not become "lost in the snowstorm" of immediate concerns created by falling oil prices.

## THE THREAT IS REAL

In closing, member cooperatives of the National Council are farmer-owned. We have endured through two oil emergencies, with farm fuel shortages and sharply higher prices. **We are not anxious to see mistakes of the past repeated needlessly in the next foreign oil cutoff.**

Enclosure 2 is a an executive summary of a White Paper, entitled "Petroleum Product Imports: Implications for U.S. Agriculture," which the National Council offers to the Committee for the record as a sort of "snapshot" of our analysis to date on this critical issue[1]. Our investigation thus far has generated as many questions as answers. However, one consideration is increasingly coming into focus: **If product imports continue to increase, displacing domestic refining capacity, a threshold will be crossed at some point which would place our nation under the threat of a new kind of vulnerability.** At a minimum, that point would logically seem to lie above an equilibrium between operational domestic refining capacity as compared with domestic crude oil production, plus SPR drawdown capacity. Indeed, the threshold may well have been crossed.

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[1] A full version of this paper was attached for the record to June 4, 1985 testimony by the National Council before the Subcommittee on Energy Regulation and Conservation of the Committee on Energy and Natural Resources.

The National Council stands ready to work with others in examining potential problems raised by product imports, and, if necessary, in exploring possible appropriate policy responses. We thank you for this opportunity to share our views, and would be pleased to respond to any questions that members of the Committee may have.

National
Council of
Farmer
Cooperatives

ENCLOSURE 1

RESOLUTION OF
BOARD OF DIRECTORS
NATIONAL COUNCIL OF FARMER COOPERATIVES

9-85

## IMPLICATIONS OF PETROLEUM PRODUCT IMPORTS FOR U.S. AGRICULTURE

WHEREAS, U.S. Agriculture must have uninterrupted access to equitably priced petroleum fuel supplies;

WHEREAS, since 1973 two oil disruptions have demonstrated that agriculture, at the end of petroleum supply lines, is most vulnerable to energy disruptions;

WHEREAS, crisis-driven price increases in excess of 800% have had devastating consequences for farmers and the U.S. economy;

WHEREAS, farmers have invested in their own cooperative petroleum system over the past 50 years in response to their needs and vulnerabilities;

WHEREAS, the cooperative system represents the only segment of the oil industry in which the consumers of its products are also its owners, meaning a unique accountability in terms of commitment of supply, service and price, and a unique institutional perspective and sensitivity to this nation's energy security;

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Serving America's Family Farmers

WHEREAS, a new kind of vulnerability threatens to emerge, as gasoline and middle distillate imports have increased more than three-fold within the last four years, and have approached 10% of domestic demand, with further increases predicted;

WHEREAS, subsidized product imports from state-owned refineries are displacing domestic refining capacity, and have the potential to jeopardize the Strategic Petroleum Reserve's (SPR) effectiveness;

WHEREAS, rising product imports disproportionately impact upon cooperative refineries, jeopardizing $675 million in assets at a time when the agricultural economy is going through a severe economic crisis;

WHEREAS, loss of these refineries would force the cooperative distribution system to be dependent on imported products and a volatile spot market--sources which dry up during a disruption;

WHEREAS, the National Council of Farmer Cooperatives is a leading and respected voice in national energy emergency preparedness policy debate;

THEREFORE, be it resolved that the Board of Directors of the National Council of Farmer Cooperatives is deeply concerned about the implications of these trends for U.S. agriculture, and urges the U.S. Government:

- To determine on an expedited basis the level of operating domestic refining capacity necessary to meet national and economic security objectives, including the needs of American agriculture; and

- To develop an appropriate policy response designed to achieve the above objectives, while incorporating the following attributes to the maximum extent practicable--
  - minimum adverse farm fuel price impacts; and
  - minimum likelihood of trade retaliation.

ENCLOSURE 2

National
Council of
Farmer
Cooperatives

# PETROLEUM PRODUCT IMPORTS: Implications for U.S. Agriculture

Growing U.S. dependence on foreign petroleum products could **add an ominous new dimension** to the continuing threat of petroleum supply disruptions.

If this trend continues unabated, **the next emergency is likely to involve a cut-off** not only of crude oil but also of **petroleum products**. Remaining domestic refining capacity at that time may be inadequate to convert SPR crude oil into needed products.

**The consequences for agriculture and the nation would be devastating.**

March 1986

1800 Massachusetts
Avenue, Northwest
Washington, DC 20036
202/659-1525

Serving America's Family Farmers

# PETROLEUM PRODUCT IMPORTS
## Implications for U.S. Agriculture

## EXECUTIVE SUMMARY

Farmer cooperatives' heavy involvement in energy emergency preparedness policy debate over the past 13 years hinges upon the fact that U.S. **agriculture must have uninterrupted access to equitably-priced petroleum fuel supplies.** Yet agriculture is perhaps most vulnerable to energy supply disruptions.

This combination of need and vulnerability has led farmers to invest in their own cooperative petroleum system over the past 50 years. The cooperative system represents the only segment of the oil industry in which the consumers of its products are also its owners. This feature carries with it not only a unique accountability in terms of commitment of supply, service and price, but also **a unique institutional perspective and sensitivity to this nation's energy security.**

History has demonstrated that even a relatively minor petroleum disruption can generate long gasoline lines, crisis-driven price increases and devastating macroeconomic consequences. Farmers were forced to pay as much as $5 billion more annually for their petroleum fuels from 1979 through 1983 as a result of the Iranian disruption alone.

**Imports of finished motor gasoline and gasoline blending components** have increased more than three-fold over the last four years and have also tripled as a percentage of U.S. demand. Substantial evidence exists that this trend may continue. **A new kind of vulnerability** threatens to emerge, with potentially grave national security implications.

- Increasing petroleum product imports could **displace sufficient domestic refining capacity to jeopardize the Strategic Petroleum Reserve's (SPR) effectiveness.**
    - Remaining domestic refining capacity at some point would be insufficient to refine domestic production plus SPR drawdown in the event of another disruption.
    - Supply disruptions in the past cut off crude oil. The next disruption could curtail finished fuels.
    - Farmers and other U.S. consumers require petroleum products, not crude oil. Refiners are necessary to accomplish that conversion.

EXECUTIVE SUMMARY (continued)

- **Rising product imports exacerbate the current depression in the domestic refining industry.**
  - Cooperative refineries are disproportionately impacted, as they generally do not have offsetting crude oil earnings. Additionally, the agricultural economy is going through its own severe economic crisis. A total of $675 million in cooperative refinery assets is potentially at risk.
  - If cooperative refineries are forced to shut down, their traditional role as the principal supply source for the cooperative distribution system would be replaced by dependence on imported products and a volatile spot market. These sources dry up quickly during a disruption, and a fuel shortage could quickly degenerate into a food crisis.
- Available information indicates that product imports will indeed continue to increase:
  - Arab OPEC nations have already added or are in the process of adding four new refineries with a combined capacity in excess of 1,000,000 barrels per day.
  - Most exports by these refineries will be targeted for the U.S. market.
  - Many of the foreign refineries supplying gasoline to the U.S. are state-owned and controlled. Products from these refineries are often subsidized.

The potential stakes are so high that petroleum product import trends, and their implications for U.S. agriculture and for national energy security, deserve the fullest investigation on an expedited basis.

March 1986
NCFC

Senator HATFIELD. Thank you, Mr. Van Arsdall.

Dr. Mark Cooper, we did get to you, executive director of Consumer Federation of America.

## STATEMENT OF DR. MARK N. COOPER, DIRECTOR OF ENERGY, CONSUMER FEDERATION OF AMERICA

Dr. COOPER. Thank you, Mr. Chairman.

Senator HATFIELD. That doesn't mean you have all the rest of the time, though.

Dr. COOPER. It is an unfortunate fact of American energy policy history that the most important decisions are made when the least attention is being paid to the problem. There remains a great deal of energy policy to be considered and written, and this is a very difficult time to do so, but we believe that the policy to pursue is not an oil import fee.

If the committee perceives a threat to national energy security, we urge you to renew your commitment to automobile fuel efficiency, to conservation in general, and to filling the Strategic Petroleum Reserve.

The restriction of imports in the 1960's did not work to ensure national energy security, and a restriction of imports in the 1980's will not work to ensure national energy security in the future.

Import fees create a gap between domestic and world prices that have little benefit, little payoff in terms of barrels put into the world. We have heard a number—it takes $27 a barrel to replace a domestic barrel of oil—the world price is probably $8 or $10. How long can we sustain that kind of gap?

The truth be known, in the long term, we will inevitably be a major importer of oil, and the response should not be simply accelerate the draw down of domestic reserves in the present; it should be strategic use and stockpiling of the resource and efforts to continue our reduction of consumption.

About 15 percent of the free world's undiscovered reserves are located in this country, but over half the exploration and 80 percent the drilling activity in the past decade have been taking place in the United States. We have been looking for oil in the most expensive and the wrong place.

Because the domestic resource base has been so depleted in this country, even these very intensive efforts have not in fact been able to make us "energy independent." The pay out in the future is inevitable. We will be a major importer of oil.

If there is a benefit to be had from an import fee, it will come more on the demand side. But here we would ask Congress to ask itself whether or not we need to impose these kinds of costs on consumers in the name of conservation.

Before Congress imposes an import fee on American consumers, as demand-side policy, it should pursue a host of other policies which every analysis has shown are more cost-effective. The short-term concern is still the strategic petroleum reserve, but fill so that it is large enough to make it clear that manipulations of the world market will no yield economic benefits in midterm, even; build the reserve big enough so it overhangs the market and scares people, not just as a backstop to keep us going during an emergency.

Impose serious fuel efficiency standards on automobiles. We have been backtracking. There is a great deal more conservation to be had. If there is a physical energy problem, it is a liquid fuel problem. It lies in the transportation sector, and that is where we should solve the problem.

Finally, we should continue to pursue conversation options in industry and electricity generation. Only after we have pursued these rational, cost-effective policies can consumers be asked to bear the tremendous burden that an import fee would impose on them.

When prices were rising, consumers were told that they had to let the market work in order to have the best signals and respond. As soon as prices have started to fall, however, we hear the opposite message; that Govenment must intervene because the market is sending the wrong signals.

For some in the oil industry, it would appear that the market is a one-way elevator, with an up button but no down button.

At present, national energy policy is essentially neutral with respect to imports. We believe it should be left that way. The various import fee proposals which have been floated through Congress under deficit reduction, tax reform, et cetera, are bad economic policy, bad tax policy and ineffective, inefficient energy policy.

Thank you, Mr. Chairman.

[The prepared statement of Dr. Cooper follows:]

Consumer Federation of America

TESTIMONY OF
DR. MARK N. COOPER
DIRECTOR OF ENERGY,
CONSUMER FEDERATION OF AMERICA

before the
ENERGY AND NATURAL RESOURCES COMMITTEE
UNITED STATES SENATE
on
OIL IMPORT FEES
MARCH 20, 1986

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Mr. Chairman and Members of the Committee.

My name is Dr. Mark N. Cooper. I am Energy Director of the Consumer Federation of America with offices at 1424 16th Street. N.W., Washington, D.C. 20036.

The Consumer Federation of America (CFA), founded in 1968, is the nation's largest consumer advocacy organization with membership encompassing more than 200 national, state and local groups. CFA's purpose is to represent consumer interests before Congress and the federal agencies.

We greatly appreciate the opportunity to appear before the Committee to share our views on oil import fees.

Over the past four decades American oil import policy has presented consumers and the economy with a cruel irony. In the 1960s, when foreign oil was cheap, close to its economic costs of production, American policy discouraged importation of oil. An import quota was imposed under the guise of protecting the nation from "cheap" foreign imports, but the effect was to drain America first in the 1960s leaving smaller, costlier reserves available at home for the future.

In the 1970s, when foreign oil was expensive -- its price set by political action -- American policy encouraged imports. The result was a segment of the industry built on subsidies and a much more jolting shock when the second oil crisis hit in 1979.

Now, when the price of oil has come down from the heights of political manipulation toward the economic costs of production, we once again hear calls for policies that restrict imports. In what seems to be a remarkable invitation to repeat the mistakes of history, we hear the same argument that backfired in the past, the argument that we must protect America from "cheap" foreign sources of energy.

When prices were rising, consumers were told that they had to let the market work because market forces send the best signals. As soon as prices start falling, however, we are told that the government must intervene because the market is sending the wrong signals.

At present, national energy policy is essentially neutral with respect to imports. We believe it should be left that way. The various import fee proposals which have been floated in congress make no sense as economic policy, tax policy or as energy policy and should be rejected.

## IMPORT FEES ARE A MASSIVE INTERVENTION IN THE MARKET THAT CREATE RECESSIONARY ENERGY PRICE SHOCKS

When domestic prices are not controlled, the desire to impose a fee must rest on the assumption that the price does not reflect the value of the commodity. The size of recent proposals is striking. A $10 per barrel import fee represents a massive intervention in the market.

- The national oil bill will increase by approximately $44 billion (even assuming that a reduction in U.S. imports places downward pressures on world oil prices).
- The price of natural gas will increase by approximately $25 billion.
- The increase in oil and gas prices would equal almost 2 percent of GNP.

Because the fee represents such a sharp energy price increase and because energy prices have a large effect on economic activity, imposition of a fee will have major negative impacts on the economy.

Increases in oil prices drain the economy of resources and shift resources between economic sectors. The resulting disequilibrium causes both short term recessions and imposes long term losses in output as the economy adjusts to higher prices. Almost two dozen econometric models have been used to analyze the oil price shocks of the 1970s and to predict the potential impact of future price shocks.

Given this analytic background, it is not surprising that efforts to model the impact of a fee show serious stagflationary effects. A $10 import fee is projected to have a serious dampening effect on the economy.

- It would decrease GNP by over 1 percent.
- It would reduce employment by almost half a.
- It would increase inflation by over 1 percent.

## THE TRADE ANGLE ON AN IMPORT FEE

In the effort to sell an import fee advocates argue that it will make a major contribution to solving the trade problem. Focusing on gross energy trade figures, this argument misinterprets the underlying trade issues.

First, a fee would seriously erode the competitive position of U.S. industries that are oil and energy intensive.

Second, the nations which are running the largest trade surpluses also import much larger percentages of the energy they consume.

Third, if one examines the development of the U.S. trade problem over the past decade, it is difficult to blame energy. Although the net energy trade deficit was as high as $75 billion in 1980, the overall deficit was small and trade was not a burning issue.

- Since 1980, however, the net energy trade deficit has declined dramatically. In 1985, net energy imports were about $44 billion, a smaller precentage of GNP than in 1973.
- The trade balance for all other commodities has deteriorated dramatically -- from a surplus of $51 billion in 1980 to a deficit of over $60 billion in 1985. This is the cause of the U.S. trade problem.

Fourth, if one examines those nations with whom our trade is dominated by energy, one finds that the trade imbalance is much smaller than gross figures.

By and large, they are developing nations that fund the purchase of commodities from the U.S. with the dollars earned from energy exports. The trade deficit with these nations was about $13 billion in 1984, about 10 percent of the national trade deficit.

The energy trade deficit with developed nations, primarily Canada, The U.K., Norway and the Netherlands, was only $5 billion. This represents less than 5 percent of the national total.

Trying to sell import fees as trade deficit policy simply avoids the central issues which lie in trade barriers, monetary policy and the competitiveness of manufacturing industries.

## COSMETIC PROPOSALS TO MITIGATE THE EFFECTS OF THE FEE

Recognizing the massive negative economic effects of the fee, advocates of import fees have recently begun to offer palliatives to soften the blow.

Exemptions are offered for industries or specific groups of consumers that are presumed to be hurt by the fee. The measure of pain has varied from proposal to proposal. Relief would be offered in proportion either to direct energy imports or for energy intensive industries.

A second rebate is offered for the New England region since it is particularly dependent on oil in vital uses, such as home heating.

A third rebate is offered for low income households, since they can ill-afford the increase in their bills.

The potential recipients of these rebates have uniformly resisted the idea of a fee even with a rebate.

- Aligning the industrial rebates with their actual impact will be difficult.
- As the experience with the windfall profits tax rebates to low income households showed, consumer rebates will not be channeled to the individuals who are most adversely affected, will be difficult to administer and a constant target of political debate.
- Rebate schemes erode the claimed benefits of the policy. Rebates reduce the tax revenues that can be gained. Depending on how they are passed through they may reduce the conservation impact.

## IMPORT FEES ARE INEFFECTIVE TAX POLICY

On the surface, import fees appear to raise large sums of revenues. A closer look shows that they are inefficient, resulting in much smaller net revenue gains than gross revenue collections and even smaller compared to the total cost increases they impose on the economy. They are also extremely regressive.

Three sources of revenue account for the potential revenue gains from the imposition of an oil import fee. Direct collection of tariffs from a $10 fee would average about $14 billion per year over a ten year period. Because the fee will raise the price of oil, windfall profit tax collections will increase by about $13 billion per year. Finally, because oil and other energy commodities will increase in price collections of income taxes from energy producers would increase by about $12 billion per year.

Because of the dramatic inflationary and recessionary impact of an import fee, there are large revenue losses and increases in federal outlays. Reduced income tax collection in the non-energy sectors of the economy have been estimated to offset between 25 and 44 percent of the total revenue gross revenue collections. Increased enrollment in unemployment and other entitlement programs and increased outlays for inflation indexed programs and normal government operations (especially the military) have been estimated at between 20 and 25 percent of the total of gross revenue increases.

The bottom line on fees is that they result in much smaller net revenues than gross revenues. For a $10 fee

- The total increase in the national oil bill would be about $70 billion.
- Net revenue increases would be between $12 and $29 billion.
- The estimated net revenue collection is between 17 and 40 cents out of every dollar of increase in the national energy bill.
- Increases in after-tax oil company profits would be about $32 billion.

## WHO PAYS THE BILL

Amid current efforts to make the tax code fairer, such large transfers should be a major cause for concern.

In general, energy based taxes are extremely regressive. They are especially regressive compared to income taxes.

- The poorest 40 percent of households, (those with incomes below approximately $20,000), would pay twice as much of the fee as they do of income taxes.
- The middle third of the income distribution would also bear a heavier burden. They pay about 40 percent of income taxes and would pay about 50 percent of the energy price increase.
- In contrast, the wealthiest one percent of the population -- households with incomes above approximately $80,000 -- would actually end up better off because they own large quantities of stock and would enjoy the benefits of the increase in after tax oil company profits.

Import fees are also geographically inequitable. Expenditures for home energy are much higher in the New England and the Mid-Atlantic states, as well as certain states in the upper Midwest. Those who heat with oil also bear a much heavier burden in home energy expenses -- about 40 percent higher than the national average. When gasoline consumption is factored in, the disproportionate burden on the Northeast and Mid-Atlantic regions as well as heating oil consumers is dampened, but persists.

## THE IMPACT OF AN IMPORT FEE ON DOMESTIC RESOURCE DEVELOPMENT: DRAINING AMERICA FIRST

The economic costs of a fee are large and the tax effects are highly inequitable. These negatives argue strongly against a fee. Some fee advocates ask that it be evaluated strictly as energy policy. Even as energy policy, present proposals to restructure America's relationship to the international oil market are ill-timed and ill-considered.

The restriction of imports did not work in the past to ensure national energy security and it will not work in the present.

- A $10 per barrel import fee would create a large gap between domestic and world prices, but would increase domestic supplies by a relatively small amount.
- This creates an incentive to draw down finite resources sooner in this country -- resources that would ultimately be developed when they are economically competitive without the fee.

This is exactly the process that took place while the import quota was in place in the 1960s. Exhausting supplies whose economic costs were considerably higher than available supplies elsewhere created a major distortion in the world resources base. Cheap oil had been stockpiled in the Middle East and more expensive oil had been depleted here.

- The import quota cost consumers in the neighborhood of $5 billion per year.
- In the long term, particularly when combined with the neglect of resources abroad, these policies helped to set the stage for the price explosion of the 1970s.

## DIVERSIFICATION OF SUPPLIES AND SUPPLIERS: A BETTER PATH TO ENERGY SECURITY

Encouraging a diversity of low cost oil supplies available in the international market is preferable to encouraging the overdevelopment of the domestic resource base.

- About 15 percent of free world undiscovered reserves are located in this country, but over half the exploration activity and 80 percent of the drilling activity since 1975 have been concentrated in the United States.

Because the resource base has been depleted in this country, even this intensive exploration and development have not been able to keep up reserves in this country. The depletion of the domestic resource base is reflected in the steady decline in the reserve to production ratio in this country, in contrast to a steady ratio abroad.

- The decline in the reserve to production ratio in the U.S. since 1980 has come in spite of a decline in consumption of more than 10 percent and in spite of the fact that more wells were drilled in this country between 1980 and 1984 than had been drilled in the previous decade.

In contrast to this discouraging result at home, the U.S. has begun successfully to diversify its sources of oil.

- OPEC imports are down from their historic high of 6 million barrels per day to about 1.8 million.
- Arab OPEC imports are down from 3.2 million barrels per day in 1977 to less than half a million barrels in 1985.
- Mexico, Canada, and the United Kingdom are major sources of additional imports. These three together export more oil to the U.S. than OPEC.
- A host of other countries, Norway, Australia, the Netherlands, and Trinidad, among others, provide almost a million barrels per day.

Thus, the imposition of an import fee would fall primarily on non-OPEC members, the very nations who have been the source of much of the pressure on the world oil price.

Finally, it should be noted that absolute quantity of imports is well down from the historic peaks of mid-1970s. In addition, as a percentage of total consumption, imports are below

1973 and every year since the oil embargo.

## MORE COST-EFFECTIVE POLICIES EXIST ON THE DEMAND-SIDE

Advocates of import fees frequently cite the ability of price increases to reduce consumption as one of the primary benefits of a fee. Because the proposed fees are so large, they might reduce consumption by over 1 million barrels per day and imports by 1.5 million barrels per day in the long term. Yet, the fundamental policy questions are

- o Is it necessary at present to artificially reduce imports by 1.5 million barrels a day?
- o If such a reduction is called for, is a fee the most cost effective way to accomplish the goal?

Analysis of other alternatives shows that there are more cost-effective ways to reduce domestic consumption of imported oil.

- o The National Petroleum Council identified about 1 million barrels per day in oil savings that were considered to entail minimal difficulties or changes in life style and could be implemented within 60 days. Savings of another 600,000 barrels per day were considered to be more difficult.
- o The strategic petroleum reserve provides security at a much lower cost.
- o A recent study by the Office of Technology Assessment identified 2.4 million barrels per day of permanent conservation and 1.1 million barrels per day of fuel switching that could be instituted within one to five years after an oil disruption.
- o Both the oil storage and long term conservation policies impose costs that are less than half of the import fee.

## CONCLUSION

Oil import fees are disastrous as economic policy, inefficient as tax policy and monstrously regressive as social policy.

As energy policy, which is how import fees should be considered, a fee ranks way down the list. The supply-side benefits are dubious at best -- accelerating the drawdown of domestic reserves, without enhancing national security.

Before Congress imposes an import fee on American consumers as demand-side policy, which is where its largest effects would be, it should pursue a host of other policies that are much more cost effective.

Fill the strategic petroleum reserve until it is large enough to make it clear that manipulation of supplies will not yield economic pay-offs.

Impose serious fuel efficiency standards on auto manufacturers. If there is a physical energy problem, it is a liquid fuel problem and almost two-thirds of the all petroleum products are consumed in the transportation sector.

Pursue conservation options in industry and electricity generation.

Only then can consumers be asked to bear the tremendous burden that an import fee would impose.

I appreciate the opportunity to appear before the Committee, and I applaud it for holding these hearings. It is an unfortunate fact of American energy policy history that the most important policy decisions are made when least attention is being paid to energy problems.

There remains a great deal of energy policy to be made and this is the most difficult time to do so. I urge the Committee to renew its commitment to automobile fuel efficiency, to conservation in general and to the strategic petroleum reserve.

This country will inevitably be a major importer of oil and the path to coping with that dependence is not in pumping America dry first, it lies in reducing consumption while imposing the least disruption on the economy. Oil import fees are an extremely inefficient way to achieve long term energy security.

Senator Hatfield. Thank you, very much, Dr. Cooper.

Once again, I want to thank each of you for obviously a lot of preparation and a lot of research that has gone into your testimony.

Let me pose a question, based on the following scenario. Let us assume that we are not going to get a major tax reform bill in this session of Congress. Let us assume that we still are under Gramm-Rudman, where we have to find a way to plug a gap of about a $38 billion shortfall in order to reach the target of $144 billion in the deficit side of the ledger that is demanded or required by Gramm-Rudman. Let us say we have gone through a tinkering process, as contrasted to a reform process, to enhance the revenue side of the picture, such as the Budget Committee's resolution that was introduced and reported out today. It indicates that they are calling for a $38 billion of revenue enhancement.

In that tinkering process, includes perhaps a 15-20 percent on a corporate minimum tax, this, that and the other thing—we come to a gap that has to be filled in reaching that target for new revenues.

Would we be better off in terms of the size or in light of the size of the Federal deficit and the requirements of Gramm-Rudman, would we be better off with an oil import fee that would fill that gap for $38 billion, or a part of it, and a lower deficit, or no import fee and a higher deficit?

Mr. McNally.

Mr. McNally. I don't think, Senator, that it is an either-or. I think you make a prioritization of that which is good from 1 to 10, and you look at that benefit which will give you your balanced budget. I think if I personally had to rate the way to go, I would rate 10 low and I would put an oil import tax there, and No. 1, the highest, I would put a tax on gasoline because that is a consumption tax.

For 30 to 40 years, we have been unable to cope with the fact that we pay 25 or 30 percent of the price of gasoline in other consuming countries. I think it is about time we came to grips with the fact that we have to reduce consumption of gasoline.

It is the singular, largest consumer of energy and it is the area, that if we let it get back out of control, we are going to find ourselves deeply dependent on more imported oil.

So, I don't think that the balanced budget and the oil import tax are the case. I think we have an array of long-term decisions which can maintain our worldwide manufacturing capability in a rapidly changing world, and at the same time, reduce our dependence on increased oil.

Senator Hatfield. Mr. Copeland.

Mr. Copeland. Yes; I think to depend upon—if an import surcharge was enacted, in my opinion, the Saudis would not let us tax them. That is what we are doing. The Shah of Iran said—if anybody is going to tax me, it is going to be me.

I think that they would in fact cut back production and would get their production quotas in line.

There is not an excess glut of inventory in the world. The price is not down because of huge excess inventory. That is not the case. We have been drawing down inventory since 1981. The problem is, the Saudis are undercutting everybody else and they have the ability to do so, out of total supply. All they are doing is bringing it down so we can't compete. I think that they would immediately cut back their production, that the price would go back up and the import surcharge, chances are, would never be a factor. They want the price between the $23 and $25 level.

I just got back from Japan, as an example, and met with all the senior people in Japanese trading companies, as well as the Japanese foreign office. Their feeling is that they want to see the price of oil between $22 and $25, because they recognize the long-term best interest of the Japanese is to have multiple sources of crude oil, rather than just out of the Mideast, and they say production—in contrary to what has been said here—the world's finding costs are just about the same as they are in the United States.

They are looking—and I would not count on this as a revenue producer.

Senator Hatfield. Thank you. Mr. Lamm?

Mr. Lamm. Mr. Chairman, given your two choices, I think the continued deficit might be better because the economic studies show that adding the oil import fee, particularly at $15 a barrel which it would take to get up to $38 billion to cover that full deficit, would, by itself, bring additional deficit reducing impacts on the rest of the economy.

I just can't stand by without responding to Mr. McNally, that the whole economy of the United States is based on a lengthy historical development of a living pattern that we chose. We chose to become much more dependent on mobility, individual and family and business, and the use of a much higher proportion of individual vehicle ownership than the rest of the world. For us to be compared either in theory, or heaven forbid, by an economic upheaval, with the rest of the world at the time when our economy is already in place, as it is now, would be totally devastating.

Senator Hatfield. Mr. Donohue.

Mr. Donohue. Mr. Chairman, there is no question that given the two choices, or the Hobson's choice you asked, we must go with the higher deficit. No. 1, the amount we are talking about in our accumulated deficit you can't find. No. 2, there is a great question as to the real economic effects of the size of deficit. But, No. 3, is the clear fact that either a gas tax, as suggested at the end of the table, or an oil import fee is discriminatory against a very small percentage of the economy in terms of business and finds itself discriminatory in terms of a gas tax against those least able to pay.

Those in the lower income brackets, as Mr. Lamm indicated, use the larger percentage of their disposable income for gasoline, often to travel to work and school and necessary trips. I just think it is very clear that if you are faced with that simple decision, to let the deficit run, or to put it on a small sector of the economy, or on a sector of the economy least able to pay, choose the deficit.

I think the other point I would add in final comment, is what we really have, as we listen to the gentlemen here today, some comment about foreign policy—how we deal with the Saudis and others; some comment about tax policy—what taxes do we choose and how do we deal with Mr. Packwood; and some comment about budget policy.

We really have to decide which hat we have on before we make that decision, and I am afraid all of the hats are going to be in the ring together and that is what we have to watch about.

Senator **Hatfield**. Dr. Cooper. Mr. Van Arsdall.

Mr. **Van Arsdall**. Mr. Chairman, as I indicated earlier, our membership has indicated to us an overriding concern about the budget deficit itself, and as you describe the choices, Gramm-Rudman could mean the cutting of farm programs—the gutting of farm programs, as it were, this fall. And if that is what they were looking at as the choice, I would speculate that our membership would tell us to endorse an oil import fee—again, subject to the actual construct of that fee.

I know that a couple of years ago, our board met in June just prior to a Finance Committee hearing, in similar fashion. We have traditionally opposed an oil import fee. It is not good energy policy.

Our board met and passed a resolution. The board chairman went from that meeting to the Finance Committee hearing and in no uncertain terms told them if it was their judgment this was the only way to deal with deficits and high-interest rates that were keeping American agriculture out of the world market, then do it.

Senator **Hatfield**. Thank you. Dr. Cooper.

Dr. **Cooper**. I always hesitate to be for the deficit, but having been preceded by a representative of the business community, I can vote for the deficit. The impact of import fees are just devastating economically and we are better off with the deficit.

I would also offer the observation: You assumed away the tinkering in the tax, but in fact, I think the way you look at an oil import fee is the same way I look at conservation policies. There is an awful lot of things you can do to solve the problem. So, I would urge that you tinker the $38 billion someplace else before you get to an import fee because there are better places to do.

Finally, if you still said—no, we can't tinker with income taxes anymore—then, I would say go for a consumption tax. Stand up and say—we are going to start taxing consumption and let's do it on bread, or let's do it on something else. Let's not hide what is essentially a national sales tax, intended to be such, as energy policy or some other kind of policy. If we get to the point where we are going to start taxing consumption, then let's have the full-fledged debate on whether or not we want to have a sales tax and not slip it through the door as energy policy or energy tax.

Senator **Hatfield**. All the taxes now are basically on consumption, aren't they?

Dr. **Cooper**. Some people say that. What you are talking about here is a sales tax.

Senator **Hatfield**. I understand. Well, thank you, again, gentlemen, for your contribution. And as you know, there is no specific piece of legislation pending at this moment, but, who knows, out of this session today we may find one.

Thank you.

[Whereupon, at 2:05 p.m., the hearing was recessed to reconvene Tuesday, March 25, 1986.]

# DOMESTIC AND INTERNATIONAL PETROLEUM SITUATION AND THE IMPLICATIONS OF FEES ON IMPORTED OIL

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TUESDAY, MARCH 25, 1986

U.S. SENATE,
COMMITTEE ON ENERGY AND RESOURCES,
*Washington, DC.*

The committee met, pursuant to notice, at 9:30 a.m., in room SD-366, Dirksen Senate Office Building, Hon. James A. McClure (chairman) presiding.

Present: Senators McClure, Nickles, Hecht, Evans, Johnston, and Metzenbaum.

Also present: Howard Useem, professional staff member; and Elizabeth Moler, counsel for the minority.

## OPENING STATEMENT OF HON. JAMES A. McCLURE, A U.S. SENATOR FROM THE STATE OF IDAHO

The CHAIRMAN. Good morning. Today we had intended to complete these series of hearings on the international oil situation with testimony from administration witnesses. However, in light of what we have heard, it may be necessary to reconvene these hearings in the near future.

During the 3½ weeks since we began these hearings, we have seen further declines in the international oil prices as Saudi Arabia continues to exercise its market power to manipulate oil prices. The recent emergency meeting of OPEC adjourned yesterday after failing to reach agreement on production quotas.

OPEC will reconvene on April 15. I expect that Saudi Arabia will continue its strategy to force lower oil prices in the short term in order to achieve higher prices in the long term. Nevertheless, in the longer term, normal economic growth will inevitably absorb the current oil glut. .Right now, the greatest uncertainty is not whether the price will collapse further, but when.

And then there is the question of how much carnage will be strewn across the landscape. Oil and gas producers, the producing States, and banks with large energy portfolios, are now fighting for their lives. The story is the same from Texas, Louisiana, and Oklahoma to Alaska. For example, Chevron announced that it is laying off more than 9,000 workers—15 percent of its employees—and freezing wages. Exxon, Phillips, and Atlantic Richfield all have announced reductions of between 26 and 33 percent in their capital budgets.

With spot prices below $15 per barrel, thousands of wells already have been shut in and active drilling rigs have dropped 1,212, or 73 percent below the 1981 peak. If oil prices should stabilize around $15, it is estimated that the drilling rate should average about 1,150 rigs for the year. What this means is that with the normal 10-percent annual decline in production from existing wells, domestic prodution will decline by over 1 million barrels per day by the end of the a year, and by 1990, production could drop by around 2.4 million barrels per day with corresponding increases in imports.

Many Senators are concerned. If the Russians, instead of certain OPEC members, were responsible for the recent collapse in oil prices, that concern would be expressed by extensive debate on the Senate floor. But that is not the case—instead that concern is demonstrated by oversight hearings such as this one.

While it is not true that price is being set by the marketplace, the market is not free; it is instead controlled by a handful of oil-producing nations who have their own interests at heart, not ours. Today's oil prices reflect not a price set by a free market, but the will of Saudi Arabia, which can singlehandedly determine the international price of oil. And that situation will not change in our lifetimes.

Let me underscore that. That situation will not change in our lifetimes.

Currently, oil is being used by OPEC members as an economic weapon for the third time since 1973. It could just as easily be used as a strategic weapon.

In the short term, falling oil prices are embraced by consumers, and boost economic growth. But the long-term consequences are a permanent loss of domestic production, increased dependence on foreign oil, and greater power for the few remaining survivors—with OPEC at the helm.

These hearings have demonstrated a large spectrum of opinion on the proper role of the Federal Government regarding needed tax policies to encourage domestic exploration and development, and the advisability of an import fee to preserve and protect our domestic oil and gas industry. But on one point there is uniform agreement: What is currently missing is a national energy policy. We lack a national policy to protect and preserve our domestic petroleum production and to protect our national energy security.

In addition, there is uniform agreement on the need to take advantage of current oil prices to upgrade the strategic petroleum reserve, which is the key element of the U.S capability to respond to domestic and international energy supply emergencies. This insurance investment must provide our Nation with greater protection against the possibility of a severe energy supply interruption that now exists.

Meanwhile, the administration seems to be standing back, with insufficient concern about what is occurring, but, more importantly, why it is occurring. Nevertheless, questions persist: When are OPEC members going to stop manipulating international supplies to keep oil prices artificially low? What are the consequences for the U.S. economic and energy futures?

Before we proceed with testimony of Energy Secretary John Herrington, I would like to place in the record some cogent quotes from testimony we have received during these hearings, on the lack of a national energy policy or plan.

[The material submitted by Senator McClure follows:]

# Quotes Reflecting Concern with
# Lack of a National Energy Plan/Policy
# From the Oversight Hearing on the
# Domestic and International Petroleum Situation

Friday, March 14, 1986

"...I continue to be disturbed by the complacency about this country's energy policy." From the Statement of the Honorable James A. McClure, Chairman, Committee on Energy and Natural Resources.

"It is time to make a sweeping review of the U.S. energy posture in light of the radically changed circumstances....What we need is an energy checkup, a fresh look at existing policies to see whether the old premises still apply, if indeed they ever did, and to make the myriad actions of the federal government at least consistent with the general direction in which a rational energy policy should move." From the prepared testimony of Gene T. Kinney, Editor, Oil and Gas Journal, Tulsa, Oklahoma.

"While adequate energy supplies are important to military security they are equally important for the transportation, employment and economic security of the American people. We learned this lesson in the 1970s during imposed shortages of petroleum liquids, as well as artificial natural gas shortages....We should not forget these experiences, and it should be national policy to minimize the chance that they will occur again." From the prepared testimony of Raymond H. Hefner, Jr., Chairman of Bonray Energy Corporation, appearing as Chairman of the Independent Petroleum Association of America.

## Quotes Reflecting Concern with Lack of a National Energy Plan/Policy From the Oversight Hearing on the Implications of Fees on Imported Oil

Thursday, March 20, 1986

"Since 1980, our short-sighted energy policies have encouraged imports and discouraged domestic production." From the statement of Senator Don Nickles.

"...That no national energy policy is an energy policy, and one that puts us at a disadvantage in dealing with exporting nations." ..."NEEDED: A NATIONAL ENERGY POLICY...If our call for a national energy policy has a certain echo quality to it, the reason is that those who regularly look beyond the next quarter to the next generation have recognized for some time that energy has always been essential to America's growth." From the prepared statement of Theodore A. Burtis, Chairman, Sun Company, Inc.

"In oil, as in national defense, the Congress and the administration must think strategically, not superficially. You must act on policy, not platitudes."..."There's simply nothing on the horizon to challenge the Saudi's preeminent position, and we must adjust our energy policy to face up to that fact." From the prepared statement of Fred L. Hartley, Chairman & Chief Executive Officer, Unocal Corporation and Union Oil Company of California

"Our extensive efforts actually took us to the broader realization that the United States is like a sailboat on a windless day when it comes to energy policy. We have no direction and we have no momentum. We lack a comprehensive National Energy Policy to protect and promote the domestic petroleum industry and preserve national security." From the prepared statement of J.M. "Jack" Graves, President, Calumet Oil Co., On behalf of the Oklahoma Independent Petroleum Association

"THEREFORE, be it resolved that the Board of Directors of the National Council of Farmer Cooperatives is deeply concerned about the implications of these trends for U.S. agriculture, and urges the U.S. Government:

To determine on an expedited basis the level of operating domestic refining capacity necessary to meet national and economic security objectives, including the needs of American agriculture; and

To develop an appropriate policy response designed to achieve the above objectives,...." From the prepared statement of R. Thomas Van Arsdall, Vice President, Agricultural Inputs and Services, National Council of Farmer Cooperatives

The Chairman. With that being made a part of the record, I will ask my colleagues if they have any comments at this time. Senator Hecht.

Senator Hecht. No, thank you, Mr. Chairman. Your statement was eloquent and certainly states the facts, and I again commend you on having these hearings and hope you will continue.

The Chairman. Thank you, Senator. Senator Evans.

Senator Evans. No, Mr. Chairman. I am interested in listening to the testimony.

The Chairman. Thank you. With that, we will turn to a man, no stranger to our committee. Welcome, once again, before the committee, and I am sure you have answers to all of these questions, and others that were not asked yet.

Your prepared statement will be placed in the record. You are invited to summarize, and hit the high points in whatever manner you desire.

## STATEMENT OF HON. JOHN S. HERRINGTON, SECRETARY OF ENERGY

Secretary Herrington. Thank you, Mr. Chairman. I am not sure that any of us have answers to all of these questions, but I appreciate the opportunity to appear before you and the other members of the committee to talk about the domestic/international petroleum situation and the implications of potential proposals such as fees on imported oil.

Mr. Chairman, just over 5 years ago, the President took the first step in redirecting the course of our Nation's energy policy by decontrolling U.S. oil markets through Executive order. This was a bold and courageous step.

Today, 5 years later, we have exactly the consequences that we predicted as a result of free market policies and that is, more adequate supplies and cheaper energy. Today we not only have lower prices, but this country is far less vulnerable to damage from any potential disruption of fuel supplies than it was 5 years ago. And that is thanks to our generally lower levels of oil imports, greater diversity of our supply sources, and the conversion of the strategic petroleum reserve from a mere good intention to the status of an effective insurance policy for this country.

Now, I am not here today just to speak of success, because obviously this success is not problem free. As other witnesses have said—and headlines day in and day out attest—the radical drop in energy prices during the last 3 months from over $26 a barrel in January 1986 to our current oil prices in the range of $12 to $15 has not been without serious and adverse consequences for our domestic energy producers in the oil and gas industry.

The President and the administration are deeply conscious of this situation. Income in the refining and marketing segment has been in decline for the last several years and income from most other sectors has declined dramatically.

Changes in the market are causing difficult changes in the industry. Major petroleum companies have experienced a decline in income. Publicly held independent producers have had a dramatic downturn. Oilfield service companies have been hit hard. The active rig count continues to fall. The sharp decline in price has adversely affected many oil patch businesses and workers. Investment plans, loan repayments, and jobs have been jeopardized due to changing market conditions. Prices have fallen so rapidly that business plans that appeared reasonable just a few years ago now appear unreasonable.

Some oil properties can operate profitably at a very low price. Others were brought in at higher costs when oil was selling for more than $35 a barrel. The current level of prices will force shut-in or even abandonment of some of these properties. High-cost stripper wells and some California heavy oil production will undoubtedly be shut-in due to market prices.

There have been well-publicized layoffs in the oil and gas industry, notably in Texas; but Texas is not alone. The ramifications of $10 or $12 a barrel for Alaskan North Slope oil, which can cost anywhere from $6 to $11 to transport, hold potentially serious consequences for the Alaska economy.

Above and beyond the near-term impact of oil prices on our energy industries that we are hearing about daily, are broader questions regarding our energy security. For example, will sharply lower prices reverse the positive conservation trends that have helped contribute so significantly to eliminate the excessive dependence on imported oil, or will a weakened oil and gas industry with less price incentives impair our short- or long-term energy security, also leading us back to excessive dependence on imported oil?

An oil import tax has been proposed as a relatively painless panacea, not only for the current problems in the energy industry, but for deficit reduction and tax reform, as well.

While these arguments provide a superficial attraction for enacting an import tax at a time of falling prices, it is the opinion of this administration that adoption of such a tax will be economically counterproductive. We are equally convinced that under existing circumstances, this tax is not justified on the basis of energy security concerns.

In addition, we believe that an oil import fee is bad policy, whether it is for tax reform consideration or for deficit reduction consideration.

We draw these conclusions for a number of reasons. First, the record of the last 5 years shows quite convincingly that the best price for commodities is the lowest price obtained in a free market. When prices do respond to market forces, and they fall, the overall economic benefits are clear: Increased economic growth, more jobs, and lower inflation.

Imposing an oil import fee would prevent our economy from realizing the benefits of lower oil prices. An import fee would raise energy costs for a far larger range of energy products than just the oil import subject to tax. This inflationary effect would hold down economic growth, costing the Treasury much of the revenue that the oil fee is intended to generate.

The overall effect would be to damage the U.S. economy, both by raising energy costs and by motivating energy buyers to make unnecessary adjustments not required by the cost of producing energy.

The burdens of an oil import fee on consumers and manufacturers have been well documented, but the problems with any system of fee exemptions have received less attention. Fee exemptions for particular products, like heating oil, would reduce the price burden on households, but it would create an incentive for consumers to use exempt foreign products rather than domestic products. Granting a heating oil exemption would reduce the benefits of a fee to domestic refiners.

Another reason why we find an oil import fee unwarranted is the strength of our national energy security. As opposed to a decade ago, we are operating from a position of strength. While we must continue to monitor the continuing energy developments closely, the fact is that our national energy security is more than adequate under current market conditions because of three factors:

Over 496 million barrels now exist in our Strategic Petroleum Reserve. No. 2, the diverse sources of our imports add to our security, and No. 3 large amounts of excess production capacity in the world today.

In terms of energy security, the Strategic Petroleum Reserve remains our most cost-effective means of protecting ourselves from oil supply disruptions and we will continue our commitment, which I have often stated, to review the possible need for added SPR inventory.

A fourth reason for our opposition to a fee on imported oil is our belief that the conservation ethic will not be lost because of today's lower prices.

We believe that energy efficiency will continue to be a permanent facet of our economy. Massive improvements have gone into housing over the past 10 years. Major design changes have gone into the building of new homes and new cars over the same period, resulting in reduced energy use. These changes were first motivated by price considerations, but they are now firmly part of our lifestyles. We use smaller cars and more efficient homes. Similar developments have occurred in business energy use. Energy efficiency has increased.

These changes were achieved at some cost. They are now in place. The efficiency gains will not be reversed just because prices have fallen. It would be a mistake to deprive Americans of the opportunity to enjoy the product of their labors, efforts, and sacrifices under the mistaken notion that they need to be taxed in order to conserve.

Finally, Mr. Chairman, an import fee on oil would undercut the progress that we have made toward restoring our energy health through the deregulation of our energy markets, and by minimizing Federal intervention in the marketplace.

We have no disagreement about the fact that there are serious problems in the oil and gas industry and that we have every reason to be concerned about its future and the ramifications of energy price declines in our energy security.

But let us recognize that the record tells us that the President's energy policy has been a tremendous success overall. It is time to step forward, not backward, to the goal of an even freer energy market. This means remaining true to the free market course of the past 5 years. This also means having confidence in our energy industry to make the kind of adjustments that falling prices dictate.

Producers are making the tough financial decisions required by $15 oil, and they are suspending production on some wells. Some stripper wells are being shut in and some California heavy oil production is being suspended because of cost.

Mr. Chairman, I have discussed the problems with an import fee on oil. While all of us here do not agree on the feasibility of this fee, we do agree that our energy industry's problems today are serious.

What then should we be doing? Well, one positive action that we can do, that this Congress can help in, is to enact a tax reform package that retains important tested incentives for the exploration, development, and production of oil and natural gas. Recent perceptions of the tax-paying capacity of the oil industry were formed when prices were $30 to $35 a barrel. We must be careful not to impose taxes on this industry that will cripple the ability of the industry to find and develop new reserves, or to replace current production.

The President's tax reform package, in my estimation, retains those incentives necessary to maintain our energy security.

I urge this committee and the Senate Finance Committee to retain this and other provisions protected in the President's reform package, especially in light of the current oil prices.

No. 2, in addition, we also need to move toward freer markets and that will help build our energy security foundation, not regress from it. It is in the best interests of this Nation to pursue a policy that seeks to further this objective and a constructive step that we can take now would be comprehensive natural gas decontrol.

Today's abundance, the success of free energy markets and the example of partial decontrol of natural gas clearly demonstrate that full deregulation of natural gas and its market is long overdue. Rather than consider reversing the general energy course through Federal intervention in the market, I urge the Congress to continue progress toward deregulation by adopting policies like the removal of the impediments to natural gas transportation and the lifting of controls on the natural gas market.

These actions can only work to the benefit of the American consumer, our economy, the natural gas industry, and our future health and stability. As for other solutions to current energy problems, we will continue to monitor and study them and make recommendations, if necessary, to ensure our energy security future.

Mr. Chairman, let me close by observing that this Nation learned lessons about energy in the 1970's that I hope we will never forget. During the first half of the 1980's, these lessons have been implemented in policy and they have met with success.

An oil import tax would be a retreat to the energy policies of the past. It would be a throwback to pessimism which at one time translated into a Government policy of allocation and price controls on energy, an approach that could be characterized as "allocating misery during shortage."

Let us not retreat and make the mistakes that we made in the past by allocating misery during a time of abundance. The idea that we can pick the right price for energy was wrong on the way up and it is just as wrong on the way down.

Thank you, Mr. Chairman. I appreciate your courtesy and I would be happy to answer any questions the committee cares to ask.

[The prepared statement of Secretary Herrington follows:]

STATEMENT BY

JOHN S. HERRINGTON
SECRETARY OF ENERGY

BEFORE THE

COMMITTEE ON ENERGY AND NATURAL RESOURCES
UNITED STATES SENATE

MARCH 25, 1986

## Introduction

Mr. Chairman and Members of the Committee, I appreciate the opportunity to appear before you today on the subject of the domestic and international petroleum situation and the implications of fees on imported oil.

We will be discussing a number of issues today, Mr. Chairman, but I would like to single out for discussion the subject of a fee on imported oil. As you are aware, the Administration has fully considered arguments both for and against a fee on imported oil and concluded that it would not be in the best interest of the Nation. It is our hope that this Committee and the Congress will agree with us on this matter and resist efforts to enact this fee.

While our position on an import fee on oil is firm, we welcome the opportunity to discuss this important subject. Those of us here today may disagree on the merits of an import tax on oil, but we share a mutual concern regarding the state of health of our domestic oil, gas and other energy industries, as well as the appropriate energy policy path ahead. We are pleased to participate in the dialogue today on this subject and to address these concerns.

## The Success of the Free Market

Mr. Chairman, just over five years ago the President took the first step in redirecting the course of our Nation's energy policy by decontrolling U.S. oil markets through Executive Order.

It was our belief then and it remains our belief today that the foundation of our energy policy should be reliance on free energy markets. Since then, the Nation has committed itself increasingly to rely on the resourcefulness and ingenuity of the American people in response to market forces. Heavyhanded government planning has been abandoned. We have sought deregulation whenever and wherever possible.

Today, five years later, we have exactly the consequences we predicted as a result of free-market policies: more adequate supplies and cheaper energy.

This remarkable energy transformation has been part and parcel of our economic recovery since 1981 -- and today's economic climate of growth, low inflation, and falling interest rates. This general economic health is nowhere more evident than in our overall energy health.

Crude oil prices have declined; and savings have been passed on to consumers in the form of retail prices for heating oil, gasoline, and other petroleum products that are markedly lower than they were at the end of 1980.

The United States is using energy more efficiently during the 1980's than ever before in its entire history. The worldwide oil cartel is under increasing pressure.

As a result, this country is far less vulnerable today to damage from any potential disruption of fuel supplies than it was just five years ago -- thanks to generally lower levels of oil imports, greater diversity of our supply sources, and the conversion of the Strategic Petroleum Reserve (SPR) from a mere "good intention" to the status of an effective insurance policy for the Nation.

## Problems in This Success

But I am not here today just to speak of success, because, obviously, this success is not problem free.

As other witnesses today -- and headlines day-in-and-day-out -- attest, the radical drop in energy prices during the last three months from over $26 a barrel in January 1986 to current oil prices in the range of $12 to $15 has not been without serious and adverse consequences for our domestic energy producers.

The President and the Administration are deeply conscious of this situation. Income in the refining and marketing segment has been in decline for the last several years, and income for most other sectors has declined dramatically.

Changes in the market are causing difficult changes in the industry. Major petroleum companies have experienced a decline in income. Publicly held independent producers have had a dramatic downturn. Oil field service companies have been hit hard. The active rig count continues to fall. The sharp decline in price has adversely affected many oil patch businesses and workers. Investment payouts, loan repayments and jobs have been jeopardized due to changed market conditions. Prices have fallen so rapidly that business plans that appeared reasonable just a few years ago no longer seem reasonable.

Some oil properties can operate profitably at very low prices. Others were brought in at higher cost when oil was selling for more than $35 per barrel. The current level of prices will force shut-in or even abandonment of some of these properties. Some high-cost stripper wells and some California heavy oil production will undoubtedly be shut-in due to market prices.

There have been well-publicized layoffs in the oil and gas industry, notably in Texas; but Texas is not alone. The ramifications of $10 or $12 a barrel for Alaskan North Slope oil, which can cost anywhere from $6 to $11 to transport, hold potentially serious consequences for the Alaskan economy.

Above and beyond the near-term impact of low prices on our energy industries that we are hearing about daily, are broader questions regarding our energy security. For example, will sharply lower prices reverse the positive conservation trends that have helped contribute so significantly to eliminate excessive dependence on imported oil, or will a weakened oil and gas industry with less price incentives impair our short- or long-term energy security, also leading us back to excessive dependence on imported oil?

We are concerned about the problems faced by the oil industry, its employees and the institutions which finance it, but we must keep in mind that we can cause even worse problems if we in the government intervene in the economy without first assessing the possible negative consequences of intervention.

## Oil Import Tax: A Painless Panacea?

An oil import tax has been proposed as a relatively painless panacea, not only for the current problems in the energy industry, but for deficit reduction and tax reform.

Among other things, the claim is made that the higher prices brought about by the tax would maintain incentives for conservation and spur domestic oil and gas exploration.

While these arguments provide a superficial attraction for enacting an import tax at a time of falling prices, it is the opinion of this Administration that adoption of such a tax would be economically counterproductive. We are equally convinced that under existing circumstances this tax is not justified on the basis of energy security concerns. In addition, we believe that an oil import fee is bad policy, whether it is for tax reform considerations, or deficit reduction.

## Economic Impact

We draw these conclusions for a number of reasons. First, the record of the last five years shows quite convincingly that the best price for commodities is the lowest price obtained in a free market. When prices do respond to market forces and fall, the overall economic benefits are clear -- increased economic growth, more jobs, and lower inflation.

Imposing an oil import fee would prevent our economy from realizing the benefits of lower oil prices. An import fee would raise energy costs for a far larger range of energy products than just the oil imports subject to tax. This inflationary effect would hold down economic growth, costing the Treasury much of the revenue that the oil fee is intended to generate. Congressional Budget Office analysis suggests that for each $10 billion transferred from the taxpayers to the Federal Government by an oil import fee, the public would bear approximately $3 billion to $5 billion in cost due to decreased economic performance. The overall effect would be to damage the U.S. economy both by raising energy costs, and by motivating energy buyers to make unnecessary energy adjustments not required by the cost of producing energy.

Because it would be regarded as a protectionist measure, an import fee could invite trade retaliation. It would also increase costs for our domestic producers. This would hurt the ability of exporters to sell in foreign markets. It would make domestic markets even more vulnerable to penetration by imports. It is also likely that enactment of an import fee would give rise to calls for fee exemptions, making the fee even more difficult to administer based on our experience with oil price controls. Today, five years after the lifting of these controls, the Department of Energy is still faced with substantial litigation involving billions of dollars and questions of legal liability in dealing with the regulatory aftermath of this era of controls.

The burdens of an import fee on consumers and manufacturers have been well documented, but the problems with any system of fee exemptions have received less attention. Fee exemptions for particular products, like heating oil, would reduce the price burden on households, but would create an incentive for consumers to use exempt foreign products rather than domestic products. Granting a heating oil exemption would reduce the benefits of a fee to domestic refiners.

Another possible claim for import fee exemption might come from our Western Hemisphere trading partners. At present, more than 40 percent of our oil imports come from Canada, Mexico, and Venezuela. These nations have sufficient producing capacity to supply nearly all our current import requirements. If these nations' deliveries were exempt from an import fee, the remaining revenue base could be very small. The exemptions that would follow in the wake of an import fee would create endless adjustments, and adjustments to those adjustments.

## Energy Security

Another reason why we find an import fee on oil unwarranted is the strength of our national energy security. As opposed to a decade ago, we are operating from a position of strength. While we must continue to monitor continuing energy developments closely, the fact is that our national energy security is more than adequate under current market conditions because of three factors:

- our 500 million barrel Strategic Petroleum Reserve;
- the diverse sources of our imports, and
- the large amount of excess production capacity in the world today.

In terms of energy security, the Strategic Petroleum Reserve remains our most cost-effective means of protecting ourselves from oil supply disruptions; and we will continue our commitment, which I have often stated, to review the possible need for added SPR inventory. The Reserve will reach 500 million barrels this spring. The SPR provides a strong contribution to U.S. energy security by assuring us that in the event of an interruption we will have a source of crude oil ready for prompt use. Successful completion of the 1985 test sale fully confirmed our confidence that the SPR can deliver its oil.

A question we continually address is whether the rate of development of the SPR should be accelerated in light of current and expected import requirements and in light of current oil prices. With regard to current import levels, we think the SPR is adequate at 500 million barrels. Imports are presently low by recent standards, and our sources of foreign oil are widely diversified. We see large amounts of production capacity in secure parts of the globe. Reduced domestic production [illegible] increase our dependence on foreign imports, but it will not necessarily increase our vulnerability to oil supply disruptions.

The second question that arises is whether we should take advantage of current prices to resume SPR fill. Thus far the decision to slow the rate of SPR fill has proven sound.

Before leaving this subject, let me emphasize that oil import levels and prices alone do not dictate our SPR decisions. It is precisely the conditions that cause prices to fall that make world oil market conditions more secure, and it may be true that low prices go hand in hand with a diminished need for SPR protection. The mere fact that oil is cheap does not alone justify oil speculation with public funds. We must also examine the energy security benefits. When the world is awash in oil, the benefits of holding inventory are reduced.

## Conservation

A third reason for our opposition to a fee on imported oil is our belief that the conservation ethic will not be lost because of today's lower prices.

We believe that energy efficiency will continue to be a permanent facet of our economy. Massive improvements have gone into the housing stock over the last ten years. Major design changes have gone into new homes and new cars over the same period, resulting in reduced energy use. These changes were first motivated by price consideration but are now firmly part of our lifestyles. We use smaller cars and more efficient homes. Similar developments have occurred in business energy use. Energy efficiency has increased.

These changes were achieved at some cost, but they are now in place. The efficiency gains will not be reversed just because prices have fallen. It is possible that new efficiency gains will come at a slower pace, but past discoveries will not be abandoned.

Conservation has been an indispensable and pivotal element in today's energy stability and security. Had it not been for the Nation's wise and impressive adoption of economically justified conservation, the United States today would still be in serious energy straits. It would be a mistake to deprive Americans of the opportunity to enjoy the product of their labors, efforts and sacrifices under the mistaken notion that they need to be taxed to conserve.

## Undercutting Progress Toward Free Markets

Finally, Mr. Chairman, an import fee on oil would undercut the progress we have made toward restoring our energy health through the deregulation of our energy markets and by minimizing Federal intervention in the marketplace.

We have no disagreement about the fact that there are serious problems in the oil and gas industry and that we have every reason to be concerned about its future and the ramifications of energy price declines on our energy security.

But let us recognize that the record tells us that the President's energy policy has been a tremendous success overall. It is a time to step forward, not backwards, to the goal of an even freer energy market. This means remaining true to the free-market course of the last five years. This also means having confidence in our energy industry to make the kind of adjustments that falling prices dictate.

Producers are making the tough financial decisions required by $15 oil and are suspending production from some wells. Some stripper wells are being shut-in and some California heavy oil production is being suspended because of cost.

While lower prices are causing difficulties in the industry, we only have to look back over the decade of the 1970's to realize that government intervention can create an even more difficult situation for the American people. We do not want to make a bad situation worse by intervening in the market.

## Natural Gas Decontrol

Federal intervention in the marketplace as a response to today's prices is not the answer under any pretense. The answer is to continue to move toward freer markets that will help build our energy security foundation, not regress from it.

It is in the best interest of the Nation to pursue policy that seeks to further this objective, and a constructive step toward this goal would be comprehensive natural gas decontrol.

Today, natural gas, one of our most important and valuable resources, is caught in a regulatory headlock that is keeping prices artificially high and preventing America from harnessing the enormous benefits and advantages of this important fuel. Comprehensive regulatory relief and decontrol of the natural gas market will remove one of the last major barriers to energy prosperity for the United States, and we should not rest until we reach this goal.

The President will very shortly be sending to the Congress legislation to provide a system that ensures open access to natural gas transportation and removes controls that discourage production of our lowest cost gas resources.

The result will be lower prices for American consumers, more plentiful supplies of natural gas, increased productivity more jobs and less imported oil.

Today's energy abundance, the success of free energy markets and the example of partial decontrol of natural gas clearly demonstrate that full deregulation of the natural gas market is long overdue. Rather than consider reversing the general energy course through Federal intervention in the market, I urge the Congress to continue progress toward deregulation by adopting policies like the removal of the impediments to natural gas transportation and the lifting of controls on the natural gas market. These actions can only work to the benefit of the American consumer, our economy, the natural gas industry and our future energy health and stability.

## Tax Incentives

Another positive action that this Congress can take is to enact a tax reform package that retains important, tested incentives for the exploration, development and production of oil and natural gas. Recent perceptions of the tax paying capacity of the oil industry were formed when prices were $30 or $35 per barrel. We must be careful not to impose taxes on this industry that will cripple the ability of the industry to find and develop new reserves to replace current production. The President's tax reform package retains incentives necessary to maintain our energy security.

For example, the tax treatment of intangible drilling costs (IDC's) is a vital incentive for domestic oil and gas drilling. Intangible drilling costs include amounts paid for labor, fuel, repairs, and site preparation necessary for the actual drilling. Under current law, integrated oil and gas producers may expense 80 percent of intangible drilling costs; independents can elect to expense all of their IDC's. Intangible drilling costs can represent as much as 75 percent of the costs necessary to discover and develop oil and gas reserves and when associated with a successful well, contribute to the value of the asset over its productive life. A matching of revenues and expenses would require that IDC's be recovered over the period of production. Thus the expensing of IDC's departs from ordinary cost recovery principles and provides an important benefit to companies that explore for and produce oil and natural gas.

A change from the current treatment of IDC's would be highly undesirable since it would cause a decline in the exploration and drilling necessary to sustain future oil and gas production. Clearly, energy security requires maintenance of current cost recovery rules for IDC's. The President's proposal would not change this aspect of current law.

I urge this Committee and the Senate Finance Committee to retain this and other provisions protected in the President's reform package, especially now in light of current oil prices.

## Conclusion: Learning from Lessons of the Past

Mr. Chairman, let me close by observing that this Nation learned lessons about energy in the 1970's that I would hope we will never forget. During the first half of the 1980's, these lessons have been implemented in policy and they have met with success.

An oil import tax would be a retreat to energy policies of the past. It would be a throwback to pessimism which at one time translated into a government policy of allocation and price controls on energy -- an approach that could be characterized as "allocating misery during shortage."

Let us not repeat the mistakes of the past by allocating misery during a time of abundance. The idea that we can pick the right price for energy was wrong on the way up, and it is just as wrong on the way down.

As for other solutions to current energy industry problems, we will continue to monitor these problems and make any recommendations if necessary to ensure our energy security in the future.

Our job now is to recognize the success of our free market principles and to adhere to and embellish this policy through constructive steps such as natural gas decontrol.

I believe that, given this philosophy, the right market signals, the right mix of Federal cooperation, and the right regulatory climate, the record shows that the American economy has the competitive vigor and the inherent strengths to continue on to a future of energy stability, security, and strength.

The CHAIRMAN. Thank you, Mr. Secretary. I will defer my questions for a moment. If I can then turn to Senator Hecht.

Senator HECHT. Thank you, Mr. Chairman. Mr. Secretary, I think you did an excellent job bringing out these problems. I also serve on the Banking Committee and the ramifications of the Banking Committee are the same as the Energy Committee.

With some of the banks that have been publicized in the oil-producing States like Texas and Oklahoma, with the further drop in the oil prices, what, in your opinion, will happen to these banks?

Secretary HERRINGTON. Obviously banks that are rich in energy-related loans will have a more difficult time, and I think that will probably hit on a regional basis because I would assume—in fact, we have looked at the fact that more banks in the Southwest, Texas, Oklahoma area, do have a richer mix of energy loans. It is not a happy situation, and I think that there will be a number of dislocations in that particular industry in that area.

I would rather it not happen, but I don't see a way to avoid that under the current situation.

Senator HECHT. Mexico has been in the paper in prominence lately with their dependence on oil to their economy. In your opinion, what will happen to Mexico if the price of oil goes down?

Secretary HERRINGTON. I think this impacts obviously on banks that are rich in overseas loans to oil-producing countries. We have an extremely large debt with Mexico. I personally have met with Director Beteta, from Pemex. I know they have severe problems in their payback. I am aware of efforts ongoing with the Energy Department, Treasury Department, and State Department to work out some of these problems and propose possible solutions. I don't know that there is a lot of progress to report at this time.

There were some loans made at very high interest rates, and all of those to oil-producing countries are in jeopardy at this point.

Senator HECHT. You mentioned, again, the decontrol. Would that have any immediate effect upon the producers?

Secretary HERRINGTON. Natural gas decontrol?

Senator HECHT. Yes.

Secretary HERRINGTON. Yes. It is our estimate that we would release approximately 3 trillion cubic feet of natural gas into the market by decontrol at this time. If we opened up transportation—access to the distribution system in this country—we would not only further diversify our energy sources, but we would lead to overall lower costs of energy from more secure sources in this country. It is something that is long overdue and needs to happen.

When we talk about foreign dependency, this is an area that we can truly help by making this energy source more available in our own country.

Senator HECHT. What can we do in Congress today to start oil exploration again? We have heard from many oil producers. They have stopped exploration because of economics. What can we do?

Secretary HERRINGTON. I think in my estimation, the single most important thing you can do is guard the tax incentives in the tax revision package you are considering today to provide for intangible drilling costs, writeoffs as expense items, and to keep, especially now, this vital area open to our oil industry.

Senator **Hecht**. Thank you, Mr. Secretary. Thank you, Mr. Chairman.

The **Chairman**. Senator Evans.

Senator **Evans**. Thank you, Mr. Chairman. Mr. Secretary, in your statement and in your summary on a number of occasions you mentioned the term "free markets" and I do not think there is anyone on this committee, that I am aware of, who does not agree that free markets are desirable. Do you really believe that the oil market worldwide today is a free market?

Secretary **Herrington**. Yes, sir; I do. There may be distortions in the market today, but I believe the market is free. If you did not have producers of oil outside of OPEC, I think you would have an entirely different situation. If you did not have the tremendous exploration that went on after the 1973 and 1979 shocks, you would not have a free market.

But we have the situation today, largely because there is a diverse supply of energy, there is more oil available and the world is using less. And I think that there are many, many free market forces at work today in the world.

Senator **Evans**. It is interesting. You might have said the same thing 3 months ago, but you would not have predicted 3 months ago—certainly the administration did not in the presentation of its budget—that oil prices would be anything less than $27 a barrel. That was the basis on which the whole budget, your economic predictions and everything else were made, just as little as 3 or 4 months ago.

How in the world did the free market suddenly see such an oil collapse?

Secretary **Herrington**. I think the seeds of the oil—I wouldn't call it a collapse.

Senator **Evans**. I would call from $27 to $12 a collapse.

Secretary **Herrington**. I think it is a severe dislocation. I do not see it as a collapse.

Senator **Evans**. I am not sure that Yamani would agree with that. What caused it? What were the free market forces that caused oil to drop from $27 to $12 a barrel?

Secretary **Herrington**. I think I outlined a couple of them.

Senator **Evans**. Those were all in place 3 months ago.

Secretary **Herrington**. And I think the market was turning down 3 months ago, and I don't think that—at least, you didn't have me sitting here predicting oil staying at $27. I have said there has been downward pressure on this market for a long time.

In December, we were making predictions at the Department and we were looking at oil far below $27. I know the implication of your question is that Saudi Arabia, perhaps, can control the market. The situation we have today is out of the control of the Saudi Arabians. What you have is a lack of discipline inside the OPEC organization that even they are not able to control. If they were, the market would have stayed.

What you have is excess production worldwide, and the world using less; that is more supply and less demand and those spell out free market.

Senator **Evans**. What caused this sharp increase in supply if it wasn't just the Saudis' decision to pump more oil?

Secretary **Herrington**. Obviously, that is one of the indices; their decision to pump more oil because they found themselves at a very low, unacceptable level, with a lot of cheating going on inside OPEC. They therefore decided to increase production. That was beyond their control. They had to increase production.

But what I was referring to was discoveries in other parts of the world, such as the North Sea and non-OPEC sources, that have taken place since 1973 and 1979, and also our diversifying. I can remember testimony I read about back in the late 1970's in front of this committee, where there were appointees and elected officials saying that natural gas was through as an energy source in the United States of America. It was over and done with.

We have diversified our supplies, our sources, and we are using less.

Senator **Evans**. We have been using less—Pardon me. I am so choked up on all of this.

We have been using less. It is my understanding that domestic use and worldwide use has leveled off and is now turning upward rather than downward, from the latest figures that I have seen. Is that your understanding, also?

Secretary **Herrington**. I think that is a reasonable conclusion; yes.

Senator **Evans**. Is it also your conclusion that even before this recent drop in oil prices, that domestic production in the United States was slowly turning downward?

Secretary **Herrington**. Well, I think there are more wells being drilled. The production itself, as of what date, would you say?

Senator **Evans**. Well, I am not talking about 1985. I am talking about looking ahead over the next 10 years.

Secretary **Herrington**. Well, it depends on what point. In 1985, we saw the highest production, but after that point—I don't know whether you are saying after the Saudi Arabians pumped——

Senator **Evans**. What are our predictions of domestic production over the next 10 years? Before any price collapse.

Secretary **Herrington**. I think for 10 years, looking at 1985?

Senator **Evans** Yes.

Secretary **Herrington**. I don't think we have a total answer.

Senator **Evans**. Every prediction that I have seen by every legitimate predictor is showing a gradual decline in American domestic production. Would you suggest that that decline is likely to be even faster in the next few years if oil remains at $12 a barrel?

Secretary **Herrington**. Yes.

Senator **Evans**. With that combination of continued decline and perhaps sharp decline in domestic production, with oil prices where they are, and somewhat escalating demand lead to a fairly sharp increase in the amount of imported oil we will require?

Secretary **Herrington**. I think if a lot of things remain the same, we can anticipate increased imports, but I can't predict and I wouldn't pretend to predict at what level. There are several different case studies that we have looked at, but I don't think you can with certainty predict which one is the——

Senator **Evans**. Do you think there is any chance at all that the domestic production declines, combined with an increase use of oil could lead a conscious decision, again, at some point—I do not know how many years, maybe 3, 4, or 5 years—the Saudis and others to sharply curtail production and put us right back into the box of sharply increased oil price worldwide?

Secretary **Herrington**. I don't think the mechanism is there to curtail production to the extent that you are implying. I think you have too many suppliers of oil outside of the system, operating independently, or who are dependent upon cash income.

Senator **Evans**. Do you believe that there is going to be a significant increase in demand worldwide for oil simply from the growth of other economies like China, and developing countries, who use little oil now, but who are rapidly developing? I was struck this summer when visiting the People's Republic of China and hearing them try to slow down the growth of their economy, which is now at 20 percent a year, growth in gross national product. It certainly has implications in terms of energy usage and oil usage.

Secretary **Herrington**. I think if the price of oil stays at a low level and is a cheap energy source, there certainly will be more and more use of oil. When you speak specifically of China, China potentially has oil reserves of a significant magnitude. At least, the geologic formations are in western China that could lead one to think during exploration they might develop a significant other market.

Senator **Evans**. What is your understanding of the current location of world-known reserves? Put us in two categories: OPEC nations or Middle Eastern nations, plus those under Communist forms of government. What percentage of total world supply would they have?

Secretary **Herrington**. I would like to submit the exact percentages for the record, if I could.

[The information follows:]

According to the Oil and Gas Journal, as of December 31, 1985, Middle East countries (including Algeria and Libya) controlled 61 percent of the world's estimated proven crude oil reserves; OPEC countries, including those outside the Middle East, controlled 68 percent; communist countries controlled 12 percent.

Senator **Evans**. The figures that I have, it is somewhere close to two-thirds. I think that is very accurate, but you could submit a more accurate determination.

Secretary **Herrington**. You are referring to what? OPEC?

Senator **Evans**. OPEC and Eastern Europe and Communist nations.

Secretary **Herrington**. OK. I would agree with that figure.

Senator **Evans**. Do you believe that—it sounds to me like the energy policy of this reflects the administration's energy policy; decontrol the natural gas prices, keep the drilling credits, and let the free market have its way. Is that essentially correct?

Secretary **Herrington**. I think there are some other parts to that that are pretty darn important, like simplifying the licensing of nuclear powerplants and taking some of the regulation off that industry; keeping our Outer Continental Shelf leasing programs going; looking to Federal lands for coal leasing. We are sitting on 400 years of coal sources in this country and we continue to restrict the burning of coal and the mining of coal.

This country has to diversify its energy supplies, and we are not talking about just deregulating natural gas and letting the market work. We can't go forward without looking at these many different sources.

Senator EVANS. Mr. Secretary, what kind of incentive is there for any conceivable utility to embark on even a simplified nuclear powerplant if they can look at an oil and the natural gas equivalent at something like $12 a barrel? There is no way they can make that kind of an economic decision and have any public utility commission on Earth agree with that.

Secretary HERRINGTON. I would take it a step further. I would say that there is no incentive, regardless of the price of oil, for anyone to diversify into nuclear power.

Senator EVANS. I would agree with that. But if we are only letting the market handle things—one is a short-term market, which we have found in the last 2 years can change radically and rapidly, and even the most simplified nuclear plant can't be built in 6 months or 1 year—there is an enormous lagtime between the development of alternative energy sources and coming online. If we are going to wait until whatever the Saudis decide to do—and I guess I don't share with you the belief that the Saudis were just forced into this; I think they are smarter than that and that they are manipulating our prices—at some point we are likely to see a very sharp increase in prices and then is no time to start building nuclear plants.

What incentive is there today? You talk about continued development of the Outer Continental Shelf. Name me an oil company at $12 a barrel who is going to go out and develop the Outer Continental Shelf.

Secretary HERRINGTON. You are assuming oil prices are going to stay down, and they are not going to stay down. I mean, I don't think there is anyone in this room that says oil is going to stay at $12 forever. What I am saying is——

Senator EVANS. Why shouldn't it? If you say that we are using less, we are awash in oil; what will drive it up again?

Secretary HERRINGTON. More demand for oil at this price, as you say, will drive the price back up. That is the way the market works.

Senator EVANS. You do not believe the Saudis have that in mind at all.

Secretary HERRINGTON. Sure they do.

Senator EVANS. Well, in other words, they are trying to manipulate the market.

Secretary HERRINGTON. Listen, I do not agree with your statement that the Saudis are manipulating—there is no question that they are manipulating. What I am saying is they were forced into the manipulation. They could not hold OPEC together.

Senator EVANS. They have chosen an alternative way to attempt, at least, to control prices. I do not think you believe for one minute that Saudis are down at this level of oil prices because they desperately need the money or that they are on their last legs or that they do not have another shot in their cannon.

Secretary HERRINGTON. I don't think I said that.

Senator EVANS. What good will—I do not necessarily disagree with the concept, but—what good will drilling credits be at this price? If you can expense all costs, that is fine, but how are you going to get anybody to invest? If they are going to invest recovered costs, but if the product cannot sell for enough to recover the costs—what kind of an investment is that?

Secretary Herrington. I think it is shortsighted to evaluate this situation on today's price.

Senator Evans. So do I.

Secretary Herrington. I think we have to assume that oil prices will go back up again, because of increased use and decreased supply; because it is not profitable at these prices. What we can't do is, when the industry is down, drive more nails into the coffin by closing up incentives for exploration. And I think that would be shortsighted. I also think we ought to stop saying right now, look, the price of oil is cheaper, we will never need natural gas so let's not deregulate; who would ever invest in a nuclear powerplant because oil is cheap, so let's not change the licensing regulations.

Now is the time to deal with these problems and diversify our sources of energy in this country.

Senator Evans. Thank you, Mr. Chairman. I may have other questions to submit.

The Chairman. Thank you.

Senator Nickles.

Senator Nickles. Thank you, Mr. Chairman. Mr. Secretary, I will follow up on Senator Evan's statement. I was bothered. I heard throughout your statement, talking about the free market. I think Senator Evans did get an admission from you that we really don't have a free market; we have a manipulated market. Which do we have?

We have the Saudis manipulating the market, or we have a free marketplace at work?

Secretary Herrington. I think we have a free market with the Saudis attempting to manipulate the free market, and I don't think they are going to be successful in it.

Senator Nickles. Mr. Secretary, I beg to differ with you, but the Saudis are manipulating the market and that does not mean that there is a free marketplace working. The Saudis stated 4 months ago that they were going to increase their production. They doubled their production and prices have fallen in half. Is that not a fact?

Secretary Herrington. That is a fact.

Senator Nickles. I hear all this free market, and I believe in the free market system, but I do not see where you have one country which exercises a considerable control over the excess production capacity of the world, when they increase their production or double their production, and you can correct me if I am wrong, from 2, maybe 2.5 million barrels per day up to about 4.5 million barrels per day, that that 2-million-barrel increase that they put on the market has driven prices down about 50 percent in the last 3 months.

I don't see that as a free market. I see that as one member, the most powerful member of a cartel flexing their muscles to achieve their objective and we see the result of them being able to do that. They flexed their muscle in the past by restricting production and were able to increase prices. Now, they are exerting their muscle in the marketplace by increasing production and they have brought the prices down.

As my beliefs would go, to just allow the marketplace to go willy-nilly and say it is supply and demand. That is one country exercising no muscles in a cartel situation where they are determining the world price. That is not a free market. That is the Saudis and their leadership, Yamani, and the king, and whoever, over there, deciding that they are going to reassert themselves in an area that want to control the prices.

I do not see that as free market.

Secretary Herrington. Well, you don't have the cartel today. You have an attempt at the cartel; it did not work.

Senator Nickles. I beg to differ with you. I would say that maybe in the cartel, but you have—more power than the cartel—you have one member of the cartel. You mentioned all these increases in other sources of supply—I do not see those appreciable increases coming from any other country.

We have seen the price of oil decline 50 percent in the last 3 months and the only appreciable, real significant increase came from the Saudis—not from other OPEC members. I recognize that some other OPEC members increased their production, the Saudis has curtailed. So they are trying to reassert themselves both in the world marketplace and in the cartel.

But the only increase—and I am talking about this last 3 months—is that the Saudis have doubled their production. You did not see a doubling of production from the United Kingdom, from the United States, from Mexico, Venezuela—no other country played. All those other country production levels—correct me if I am wrong—submit additional information if I am wrong—has remained relatively constant.

The only 2-million-barrel production per day increase from the Saudis. So you have a manipulated market; not a free market.

Secretary Herrington. I didn't disagree with that statement. I have not said that anyone else increased production in the last 3 months. The reason the OPEC cartel came apart was development of supplies outside of OPEC; in the North Sea, for example.

Senator Nickles. Could you show me figures? I think you are wrong. I am just looking at the United Kingdom. The United Kingdom has shown some increases, but marginal. I mean, in 1983, 2.3 million barrels per day; 1984, 2.5; and 1985, 2.6. That is a very marginal increase and that didn't cause a reduction of price in that area.

Show me another country—I think if you add them altogether you are talking less than a half million barrels per day in the last year's increase. So that was not the contributing factor.

Secretary Herrington. Senator, I am not talking about short term, the last 3 or 6 months. I am talking about since the oil shocks of 1973, the late 1970's, the development of oil sources outside of OPEC have coupled with decreased usage led to the disintegration of OPEC. We are talking about the existence of sources outside of OPEC and their production.

I would agree with you over the last 3 months; I have not seen substantial increases, other than OPEC.

Senator **Nickles**. In your statement, you mentioned one of the reasons why we do not need an oil import fee is because we have excess production capacity.

Secretary **Herrington**. Yes.

Senator **Nickles**. Would you like to inform this Senator where is that excess production capacity? Correct me if I am wrong, but isn't almost all of the excess production capacity in the world today in the Middle East?

Secretary **Herrington**. I would say not at all.

Senator **Nickles**. OK. Let me rephrase that. The United States has been producing about what, 9 million barrels per day, flat, for several years.

Secretary **Herrington**. Yes.

Senator **Nickles**. I think you need to do some more homework, or maybe I do, and if I wrong, I will be glad to admit it; I have been wrong before. But I think almost all the increased production capacity today lies in the Middle East. The United States could not increase that 9 million barrels per day if we wanted to—only marginally. The United Kingdom cannot do much more than what they are doing right now. You can't see much of an increase from Mexico; you can't see much of an increase from Canada, Venezuela. The other exporting countries, or producing countries cannot increase that much. The only major, significant increase of production capacity in the world today is in the Middle East.

Secretary **Herrington**. I think we are saying the same thing. My statement is that there is too much production of oil in the world, as compared with demand. I call that excess production worldwide.

Senator **Nickles**. Where did that come from?

Secretary **Herrington**. That came from the North Sea; that came from further exploration in the United States since 1974.

Senator **Nickles**. The United States is producing the same thing, Mr. Secretary, we have been producing for the last several years. I am saying that all the excess production capacity—the United States—can we turn a valve and increase production another 1 million barrels per day in this country?

Secretary **Herrington**. You missed my point. We are using less; we are producing more worldwide. That means there is excess oil production capacity worldwide.

Senator **Nickles**. Would you submit to this committee, because I think that is maybe the way we will get off this subject—show me where the excess increased production capacity has increased from 1983, 1984, and 1985, in the world, and I think you will find that the capacity, the only real capacity is in the Middle East countries.

The Saudis could increase their production, I mentioned, 4.5 million barrels per day—they could increase it, what, 8, 9, or 10 million barrels per day? I suspect that there may be some other Middle East countries that could increase their production capacity substantially in a very short period of time.

I think you will find that there are no other countries in the world today that can do that.

Secretary **Herrington**. I will be happy to submit that for the record.

[The information follows:]

Between 1982 and 1985 OPEC production decreased an average of about 2.8 million barrels per day, while world production increased about 0.2 million barrels per day. Countries which have significantly increased their production during this period and the corresponding amounts include:

Canada—0.2 million barrels per day.
United Kingdom—0.5 million barrels per day.
Norway—0.3 million barrels per day.
China—0.4 million barrels per day.
United States—0.3 million barrels per day.

The Energy Information Administration estimates production capacity of OPEC countries. In 1985, OPEC had about 9 to 10 million barrels per day of available excess production capacity of all oils. Other countries produced near their peak sustainable levels during 1985 having less than half million barrels per day of excess production capacity.

Senator NICKLES. Thank you.

Senator EVANS. I wonder if the Senator would yield for just a moment. It seems to me that the distinction here, as I have listened carefully to this exchange—the Senator from Oklahoma is talking about oil production capacity and I think the Secretary is talking about the fact that there has been an increase in oil production worldwide. I think that there is more than just a distinction there. I think there is a difference, but that oil production which has come from more wells that we have drilled here, more wells that the British have drilled, Norwegians, and others, represent wells that are operating at capacity or close to it.

Secretary HERRINGTON. Yes, sir.

Senator EVANS. They have no excess capacity; they have no ability to change or react the market and I think that the Senator from Oklahoma is right; the oil capacity—the ability to change prices is an ability to turn the valve one way or the other and lies almost exclusively in the Middle East.

Senator NICKLES. It does lie exclusively in the Middle East and they have exercised it both ways. They have exercised it in driving prices up and they have exercised it in driving prices down. We do not have that flexibility and that is what I am trying to tell you. You do not really have the free market operating; you do have excess capacity, so they can both sides of this switch.

They can set the oil prices as they—and when I say "they," I am not talking about the Saudis. The Saudis can do it overnight.

Secretary HERRINGTON. I understand and I think that the Senator clarified that well; that is exactly what I mean, but let me ask you—what is the next move? They have made their move; they have increased the production. You have a price in the $12 to $15 range. What is the next move?

Senator NICKLES. Mr. Secretary, they can go both ways. If they wanted to increase their production, they could drive the price of oil down a lot lower, or if they want to reduce it back down and they take 2 million or 2.5 million barrels off today, you will see the prices go back up.

Now that is not a free market. Again, that is a king and a few cousins trying to decide what the price of oil is going to be. They have the power to do it and they are doing it.

I just think that you, as Secretary of Energy, need to be aware of that and not act like—hey, we have seen significant production increases in the world. The non-Communist countries in 1973 produced 45 million barrels per day. In 1982, 38 million barrels per day; in 1985, 38 million per day. So you are not seeing that much difference in the non-Communist countries.

The real instance is that you have the Saudis—and they want to be able to play both ways. Yes; they have reduced their production where maybe they lost their capacity to back out further and so to keep the prices there, and I think they want to be able to play both sides of this equation and that is the reason why they are back into production.

I think it is awfully important for you to be aware of that and realize the manipulations that are going on in the marketplace today—not just to resolve the free market forces. The Saudis attempts, and may well be successful—it remains to be seen—some people say, well, how wise is it if they double their production and the price falls in half, they have not increased their revenues. I think they are looking at a more long-term situation—we will have to see.

But the decision is lying with them, and not so much with strictly market forces.

Let me ask you just a couple of other things quickly, and I appreciate the chairman's indulgence. We are importing what percent of our oil today?

Secretary HERRINGTON. You can get estimates all the way up to 33 percent, but we figure 27 to 28 percent.

Senator NICKLES. I think it is closer to 30, but 27 would be a low. What do you think that percentage will be in 5 years?

Secretary HERRINGTON. I think there will be an increase; as to what level, I can't tell you.

Senator NICKLES. Would you think 50 percent would be a reasonable guess?

Secretary HERRINGTON. No; I think that is far too high.

Senator NICKLES. It is far too high? Mr. Boggs made the same statement. I will also tell you, we had a panel, and I compliment the chairman for the panel that we had on this same issue 1 week ago. Almost the entire panel—and these are energy experts—these are people who have made their lives in energy—all of them thought 50 percent was a reasonable projection.

Now let me just give you a couple of facts. We produce in this country about 9 million barrels per day. Is that right? And we are consuming about 15, if you include oil and oil products. Is that right?

Secretary HERRINGTON. Yes.

Senator NICKLES. So, if you look at that and the amount of drilling—do you know what the number of active rigs today are?

Secretary HERRINGTON. Substantially down.

Senator NICKLES. Do you have any idea what it is?

Secretary HERRINGTON. 1,200.

Senator NICKLES. How about 1,063.

Secretary HERRINGTON. I would accept that.

Senator NICKLES. 1,200, you would have to be talking about last week. Last week we were at 1,137; this week we are at 1,063, and we will be below 1,000 in another couple of weeks. We are going to be half of what we were 1 year ago, or a fourth of what we were 4 years ago.

I mean, we have a domestic industry that is dying and if it is dying because of strictly market forces, it would be one thing. It is not. It is dying because of the manipulated market by the Saudis. I feel it is awfully important for you to know that.

You may still decide, no; I do not want to support an oil-import fee. There are plusses and minuses to a fee, but I think it is awfully important you understand what is happening. Because if we only had—the reason why we are still at 9 million barrels per day is because we end up 4,000 rigs ready a couple of years ago. We are still enjoying the production from those rigs.

We are going to be suffering from the fact that we have 1,000 or less than 1,000 rigs 4 years from now. You are going to see that production in the United States decline substantially from that 8.9.

I can tell you in my State, and you mentioned stripper wells in your statement. That is 14 percent of the production in the United States. Half of those stripper wells today are not economical. A great many of those are being shut in today and that percentage will increase substantially. That is over 1.2 million barrels per day—a lot of that will be shut in and shut in that we will not recoup or recover. It will be permanently lost. So that 1 million barrels per day, or 0.5 million, or whatever it will be, will mean that we will be importing that much more.

So I think that your assessment and Mr. Boggs' assessment that 50 percent is totally out of line in 5 years is really wrong because production schedules and what it takes—those rigs are disbanded, the crews are disbanded. Even if you had a price increase, which I do think will come, Mr. Secretary. I do think there will be some price increases coming in the future and it is going to be because we are more dependent and more vulnerable on imports and on the Saudis. The Saudis do not want to hold it down there forever. That is in their best interest to do so.

They will decree there will be price increases in the future and when that happens and when we have shortages, the prices will increase.

Let me just ask a couple of quick questions. Does it make any sense to have a domestic tax on domestic production and not have a tax on imports?

Secretary HERRINGTON. No.

Senator NICKLES. We currently have this policy. We have had it since 1980. The President said he wanted to repeal it in 1980, but it has not been repealed. We have had a tax on domestic production called windfall profit tax. It has raised $77 billion from four States, primarily, on domestic production. We have had no comparable tax on imports. Imports have paid zero. Domestic producers have paid $77 billion.

Is that a free market philosophy?

Secretary HERRINGTON. Economically, on a theoretical basis, you would take your taxes outside of computation of what a free market is or is not, but I would have to agree with your statement, and I think the President still feels the same way.

Senator NICKLES. Since we have prices as low as they are today—as a matter of fact, all the prices are below the windfall profit tax floors or bases. I can introduce legislation to repeal that tax. Would the administration support that?

Secretary **Herrington**. Yes, sir. I think we are aware of that and we do support it.

Senator **Nickles**. I appreciate that. You mentioned a couple of other things which I was pleased to hear in your statement dealing with natural gas decontrol. I have visited with you in the past and worked with some other people. I think it is awfully important that we do deregulate natural gas. We have heard your statement; we have heard the President make a statement. He said that he would submit legislation. We are still looking for it.

Secretary **Herrington**. It will be here. We don't want to introduce it while you are in recess. I think you are planning to go out Wednesday. But it is imminent. We will be here with a natural gas bill. It will be introduced in the House.

Senator **Nickles**. I question the wisdom of introducing it in the House. We are having a hearing on natural gas on April 15. Will you have that legislation, and be prepared to testify at that time?

Secretary **Herrington**. Yes. The 15th will be fine.

Senator **Nickles**. You mentioned you planned on presenting it to the House. I do not know that this Senator wants to wait on the House of Representatives, nor do I necessarily agree with a lot of their philosophy when it comes to natural gas.

Are you going to have a contract carriage provision?

Secretary **Herrington**. We haven't finalized it, but the answer is yes. We were looking last night at some of the provisions. I think we are down to the final proposal. I think I would like to say at this time yes.

Senator **Nickles**. I am assuming that you would also have a Fuel Use Act, incremental pricing?

Secretary **Herrington**. Yes, sir.

Senator **Nickles**. Mr. Chairman, I appreciate your indulgence.

The **Chairman**. Thank you, Senator Nickles. I am a little concerned, and I recognize the difficulty of making projections, but I am a little concerned about not only where we are but where we are going. I share with the Senator from Oklahoma, the conviction that free markets work best in the long run. I also recognize that the markets have not been free; they have been manipulated by OPEC to a degree, by Saudi Arabia, to a degree, by holding the price up by reducing the supplies for a period of time. They may now be moving to the opposite side of that particular choice of options for themselves by increasing supply and depressing price.

I would agree with you that those are aberrations on the free market, but the free market is causing those pressures on them and they have caused their reactions. I am concerned about what that means to us, not in terms of whether or not it is a free market, but in terms of what it means to us in dependence and what that means to us in terms of economic and military security.

If I recall correctly, and I think I do, the United States consumes about one-third of the free world's oil. Is that not correct?

Secretary **Herrington**. Yes.

The **Chairman**. And that we have about 5 percent of the free world's proven reserves.

Secretary **Herrington**. Yes.

The **Chairman**. I think you would agree with me that if OPEC had reached a production cutback agreement at Geneva, and so failing to achieve that, they have succeeded in achieving a cutback in production—that supplies would have tightened and oil prices would have increased?

Secretary HERRINGTON. Yes.

The CHAIRMAN. Is it not true that fall oil prices have already led to shut in of some domestic production?

Secretary HERRINGTON. Yes, Mr. Chairman. I think that that is true.

The CHAIRMAN. And there has been a major decrease in domestic exploration and development expenditures by our oil companies.

Secretary HERRINGTON. Yes, sir. And I think one more step—I think projected budgets of exploration companies into the outer years are probably down, too, at least from conversations I have had.

The CHAIRMAN. The combination of what has already been done and what they are planning to do will decrease the finding rate of oil and gas in the United States.

Secretary HERRINGTON. I think that is correct.

The CHAIRMAN. Then our proven reserves, our recoverable reserves are likely to decrease over time, not increase, as a result of current conditions.

Secretary HERRINGTON. Yes.

The CHAIRMAN. Now, if that is true, does that not increase our dependence upon foreign oil?

Secretary HERRINGTON. Yes; I think it does.

The CHAIRMAN. We are now about back where we were in 1973 in terms of percentage—or 1974, in terms of percentage of imports to domestic consumption. If I recall correctly, we were then about 30 percent; we are now about 30 percent, give or take a little, and that depends upon whether you are talking about total imports or net imports as to whether the figure is a little below 30 percent or a little above 30 percent. Am I not correct?

Secretary HERRINGTON. Yes.

The CHAIRMAN. If you assume that the exports a product, and true, what we are involved in are relatively unchangeable—and most of them are relatively unchangeable—then true dependence is measured more by gross imports than it is by net imports.

Now there are those who would say that they are not unchangeable and therefore we should look at net imports rather than gross, but there is only about a 4 or 5 percentage point difference between net imports and gross import figures. So, while consumption has dropped from around 17 million barrels per day, to 16.4 million barrels a day in January—therefore, consumption is down not only in the United States, but worldwide—our import dependence has not changed that much.

It is interesting to me to go back—and this will keep you awake. Most of the reading you do puts you to sleep—Federal Energy Administration, "Project Independence, A Summary, November 1974."

That would probably put you to sleep in 1974, but in 1986, it is hilarious reading. I only say that not because you were on watch at that time—we were watching but not responsible for the figures that were in that. It is really very interesting reading, to look at estimated imports by reason as a function of price per barrel at the

United States, 1985. There are three price ranges given; $4, $7, and $11. Now before we think those prices are too ridiculous, let us adjust them for inflation. If we do that, they would then be in 1985 dollars, $9, $16, and $25.

The $25 was the upper range, and $11—you look at the maximum export potential capacity. Saudi Arabia, 19.3 million barrels per day, projected for 1985—far greater than their actual capacity. If you look at projected real capacity, 53.1 million barrels per day, and estimated 1985 demand, 28.3 million barrels per day.

In 1974 we were projecting the excess capacity of 50 percent, or 100 percent if you want to look at demand and then capacity as percentage of demand. We had double the potential at $25 per barrel. Actually, we don't have anything like that capacity today, even though the price did move to the upper range of the estimates in 1974.

Where will be 9 or 10 years from now, or 11 years from now? What is our ability to forecast? I pose the question without having the answer, but I do know this, that if indeed we are seeing a reduction in exploration and development right now, and we are, we then see a reduction in production, and we are seeing it right now—that is not theoretical, that is actual, and if we see world capacity failing to be added to in the next 10 years, as it was in the last 10 or 20 years, as this may prove to be the case, and we see more demand increasing, as indeed it will at lower prices, then import dependence and supply-demand relationships change dramatically.

We do not have 100 percent reserve. We have a marginal reserve capacity. Isn't that correct? Worldwide?

Secretary HERRINGTON. Yes.

The CHAIRMAN. Now in 1983 or 1974, as a result of a Middle Eastern war, prices went up on imported oil from less than $2 per barrel, landed on the east coast of the United States, to something on the order of six or seven times that, in just a very short period of time. That lasted until 1979. World supply-demand balances were very tenuous, with a slightly excess capacity by 1979. Then the Shah of Iran fell and there was uncertainty in the world pricing pattern and availability of supply, and the price just doubled—did not just go up a little bit; it doubled.

I think most observers would say it has been a major factor in the world's recession since 1979. We are only just now getting away from that problem, recovering from that problem. I look at not just today's consumptions patterns, with 32 percent dependence on gross imports—32 percent of our consumption. I look at 1995 estimates which will again have us in the same range of forecasts that were made for 1991, when those forecasts were made just 10 years ago.

So, the production consumption pattern seems to me to be moving at precisely the way they were forecast to move in 1973, with the exception of world production capacity, which is substantially lower than was estimated in 1974.

We were looking at around 50 percent dependence upon the imported oil. We are now looking, I think, by your estimates, at 47 percent dependence in 1995. We are seeing what can happen when a country—whether the OPEC cartel is capable of managing the world energy supply and price or not—they have the capacity to affect it. They may not control it.

We are moving right back into a period of time in which our vulnerability will be as great as it was in 1973, forecasted for the future, and people are saying we ought to do something about that. So, 1974 came and people said, "Why didn't you do something about it?" So, 1979 came and went and somebody said, "Why didn't we do something about it?" And now we are sitting in 1986, looking at the comfortable picture of declining oil prices and looking at the uncomfortable forecast picture for the future that ought to lead us into the same kind of conclusions we had in 1974 and 1979, when we paid a very high price for having done nothing.

Would you care to comment?

Secretary HERRINGTON. That is a lot to comment on. The figure you give of 47 percent dependence by our estimates by 1995, I take it you are quoting from the EIA?

The CHAIRMAN. I am.

Secretary HERRINGTON. They, as you so correctly pointed out, have three different scenarios. I think that is probably the high end.

The CHAIRMAN. That is the median.

Secretary HERRINGTON. They are independent from the Energy Department. I disagree with that conclusion.

The CHAIRMAN. You think it is too high or too low?

Secretary HERRINGTON. I think it is too high.

The CHAIRMAN. You think our dependence would be lower in 1995 than they forecast. What is going to cause that?

Secretary HERRINGTON. Forecasting is a difficult situation. I read an editorial in the New York Times in 1978, when I was still in private business, by a Senator, not on this committee, forecasting that interest rates would never be under 20 percent again; inflation will never be under double-digit; oil price, we had better figure on $75 to $100 barrel.

The CHAIRMAN. Some did.

Secretary HERRINGTON. And some did. I think that those kind of predictions are dangerous. There were some policies in the 1970's that I think got us into a lot of the places where we are today. In attempting to allocate prices and supplies, Government interference in the 1970's might be largely responsible as to some of the area that we are in today and the problems that we have.

I don't disagree with what you say, Mr. Chairman. What I think, is now that we are at the time of so-called energy abundance, now is the time to diversify and get out of this situation where we are so hooked on foreign oil.

The CHAIRMAN. How do you diversify when there is no incentive for investment?

Secretary HERRINGTON. Well, one thing you can do is deregulate natural gas and I think that we are of the same mind on that. You can go for deregulation and allow more of natural gas to enter into our domestic market. And you can prepare for tomorrow.

The CHAIRMAN. How do you prepare for tomorrow when you depend upon the free market, and the free market says to people—do not invest a dime.

Secretary **Herrington**. I want to get the base ready for investment. I want to simplify the nuclear licensing procedure in this country, to make it easy to develop nuclear power, which can be done safely and cleanly, for the time when the oil price goes back up again. I want to get on with the clean-burning coal technology so that we are prepared to go forward when the time comes; and we have to get away from expensive foreign oil.

The **Chairman**. You know, I agree with that.

Secretary **Herrington**. You agree; we talked about this. We are of the same mind on this. I don't see a quick fix to the oil problem today. I know the price is down and we have severe problems in this industry. This industry is probably one of the most inventive and has in it some of the best entrepreneurs in our country today.

They have been in tough times before. I want to do what I can to help this time, but I think the oil import fee, which is one suggestion, is shortsighted.

The **Chairman**. Mr. Secretary, I look at such a figure, and Senator Nickles has already made reference to it—the stripper wells. I think we have to look at the pattern of our production as compared to the rest of the world, as well. The United States has over 600,000 producing oil and gas wells—615,000 plus. Of that 615,000, 452,593 are stripper wells. By definition, that is 10 barrels or less per day.

But that is almost 15 percent of our total production that comes from those 452,000 wells. Now, free world, contrasting it, but including the United States 615,000, there are only 100,000 more in all of the rest of the free world. One-sixth as many—or, to put it another way, we have six times as many as all of the rest of the free world put together, and stripper wells, alone, four and a half times as many wells as the rest of the world.

The Middle East has 4,582 producing wells. Saudi Arabia has 555. If you look at just the production records from each of those wells, you see very high levels of production coming from other countries' wells and therefore costs of production are much lower than the cost of production in the United States per well, or per barrel of oil.

We are going to see, and we are seeing now, a loss of production from marginal wells. We see that right now. It is not just a lack of activity in the future. They are going to shut down stripper wells when the cost of lifting a couple of barrels of oil per day is greater than the market value of that oil. Now for some, that means that because of geologic structures, the production will never again come back.

Once the flow stops, it is just not turned on again by opening the valve or turning on the pump. Or, if you do open that well again, it will be at a reduced rate of recovery and will take much higher prices to induce that recovery. Some, by regulatory requirement, will remove the equipment and plug the well, and those are pretty largely State regulatory requirements. They will, once having been plugged, never again be unplugged.

That production will go permanently. Take the heavy oil in California that requires the injection of steam; higher cost operation. Once they determine that the market conditions are such that they should not maintain their operations at a loss for too long, they stop injecting the steam, the field cools off. It is not just a simple matter, again, of turning on the valve and renewing production from those heavy oils. It will require a price movement above their costs of production, plus some margin, plus a guarantee that it is going to stay there before we get that back into production.

Of course, that oil will be there. We probably can get those back into production. But it will take something like the conditions that existed between 1979 and 1985 to induce that renewed production.

I look at the capacity of the Middle East and others to continue to manipulate the market. They can't control the market, but they can certainly manipulate it. The Saudis, for whatever their aim, have demonstrated that they can absorb the world's overcapacity, keep prices stable if they are willing to absorb that all by themselves, can't induce others to share with them.

There is one other country that has excess capacity; that is the capacity to produce more than they now are producing or had been producing in a large supply. It is only about a million barrels a day, but in today's world that is significant, and that is Libya. I suspect the Libyans are going to continue to be at least as adverse to our interests as they have been. I do not think the events of the last 2 days have convinced the Colonel that we are friendly; that he ought to help us. He is going to continue to do for his country what he perceives to be in their best interest.

I do not see anything in that picture that says we are going to see a dramatic turnaround in the ability of our domestic oil industry to maintain any kind of survivability in the near term. Now, I would say over the course of the next century; yes. I do not plan to be here then.

Something is happening and I am not sure that I know what it is, but the United States is less secure because of it. In my view, you cannot look at just Mexican, Canadian, and Venezuelan oil and say—well, we get 30 percent of our imports from those three countries, and therefore we are secure.

I keep reminding people that during World War II tankers were sunk off the coast of New Jersey, in sight of the shore. Shipping was vulnerable and the Nazis had 44 operable submarines. They sank ships that are still sending up oil slicks off our coast.

The Soviet Union has 600 or 700 submarines today. Oil is a fungible commodity and that which is not North American continental comes by bottom—must inevitably come in tankers. I am concerned about the security of this country in terms of our ability to survive the event of hostilities. I can look at long-term market responses and say I do not think they are necessarily adequate in the short term with respect to the security of this country.

Are you concerned about our vulnerability to economic movements that have so strapped the world, or our vulnerability to interruption of supply that would have devastating consequences to the United States?

Secretary Herrington. Yes, sir. I am.

The Chairman. You have indicated that we are going to have—that we have a great deal more independence now than we had before, and yet we import the same percentage and rising, again, as they were in 1973, 1974. Many of us, and the administration, point to the strategic petroleum reserve as a reason why we are more secure and the administration proposes to stop construction and

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stop filling before the end of this fiscal year, or at the end of this fiscal year when current moneys run out.

You know that we have a very severe question with the administration with respect to the legality of actions on sequential deferrals, which I think is a violation of the law as well as a violation of the spirit of the law, on the deferrals and rescissions of the Impoundment Control Act. I have joined with Senator Johnston in urging that construction on Big Hill be continued. I think Congress is likely to take that action simply because we are not satisfied that 500 million barrels of reserve, which is 200 days of supply—180 days of supply of import levels—is an adequate reserve for the security of this country when it is uncoupled with other actions that increase or enhance our supplies.

Mr. Secretary, what position are you going to take with respect to that deferral?

Secretary **Herrington**. If you are referring to the sequential deferral, I think it has ramifications far beyond the Big Hill and the fill rate proposals of the administration. I think it is going to be a legal question. I think those of you who are lawyers are going to agree; it has constitutional questions far beyond just this one issue; it is governmentwide. I am going to defer an answer on that because I simply don't know the legal answers or where the lawyers are going to come out.

I know that it is a serious matter. As far as the fill rate of SPR, I have recommended that the President sign the reconciliation bill and I think he will do that, which provides for I think 35,000 barrels a day. I don't think that Big Hill construction is in the reconciliation package. But it is, obviously, budget driven on the side of the administration. There were many experts in the past, and there are many experts today, who say 120 days is sufficient protection in the SPR facility.

I think it has been the administration's position and it is, certainly as I sit here, that that is sufficient and that we should halt filling until circumstances change.

The **Chairman**. Mr. Secretary, that has been the administration's position and the Congress has disagreed consistently over the last several years. I share that disagreement. It is my conviction that we ought to be, particularly with the declining prices of oil, the current market is a good time to buy. Perhaps instead of selling Elk Hills, we ought to be building Big Hill and filling it.

But, there are a number of other questions, and I will reserve those questions and submit them for answer in writing, and yield to Senator Johnston.

Senator **Johnston**. You were doing well, Mr. Chairman. I hate to cut you off.

Welcome to the committee, Mr. Secretary.

Secretary **Herrington**. Thank you, sir.

Senator **Johnston**. Mr. Secretary, first of all, to get the record straight, I am a strong free marketeer when it comes to the price of oil and gas, as you know. At the same time, I have not total faith in the free market. For example, I agree with you that intangible drilling costs should be a deduction; that we ought to have a depletion allowance, which some would call a tax subsidy for the energy industry.

By whatever name, I think it is not only good but essential and we are certainly in agreement on that. Are we not?

Secretary **Herrington**. Yes, sir.

Senator **Johnston**. And certainly the SPR is also inconsistent with a free market. If you have a free market, you let the market allocate your supplies. You do not worry about a shortage; you let prices rise and fall with supply. But you would agree with me that a real free market is not desirable and not in the national interest, would you not?

Secretary **Herrington**. I am a little unclear on the question. A real free market is not in the national interest?

Senator **Johnston**. Yes. Expensing intangible drilling costs and providing a depletion allowance are inconsistent with the free market, because they are both a tax subsidy. The SPR is inconsistent with the free market, because it is a Government-owned reserve to be released in a time of shortage, maybe even in a time of rising prices to moderate those ups and downs on prices. I think we would agree that those things are inconsistent with a free market, and therefore, you and I would agree, would we not, that a total free market, or what I would say a real free market is neither desirable or not in the national interest.

Secretary **Herrington**. I would like to qualify that a little bit. My definition of free market does not take into effect tax policies, or things like maintaining a large national defense, which is an expense you would rather not have, and other such items, and we agree on that point.

Senator **Johnston**. We can still have a free market and have a tax on imported crude?

Secretary **Herrington**. No, sir. I do not think you can.

Senator **Johnston**. I thought you just defined that out of the free market.

Secretary **Herrington**. I understand. Well, some people have called it a user fee because it would pay——

Senator **Johnston**. That is a good name.

Secretary **Herrington**. Because you are paying for the SPR oil that you are putting in the ground by user fee, and the administration is not opposed to user fees.

I think it is a tax. I mean, you can't get away from the fact that it is a tax.

Senator **Johnston**. Oh, I think it is a tax, too, and I think it is inconsistent with a free market. I am just trying to really face up to what you and I talk about. When we talk about free markets, we do not mean real free markets.

A real free market is like with VCR's; you know, we had a real free market and Japan took over that market because they could make them cheaper—some would say they have predatory pricing. But in any event, they have the whole market, whatever it is, and we are willing to rely upon Japan totally for our supply of VCR's.

But you and I don't think we ought to do that with respect to petroleum, even if Japan or Saudi Arabia, or whoever, could produce it cheaper than we could. Would you agree with that?

Secretary **Herrington**. I am close to agreeing with you. I am not sure I understand it exactly.

Senator **Johnston**. What I am saying is——

Secretary **Herrington**. Pure free market, there is no such thing that I know of.

Senator **Johnston**. Well, we have got more of it in other things than we do in petroleum, and we have those incursions into the free market in petroleum because we think petroleum is fundamentally different from some consumer good out there where national reliance upon another source is not so important as it is with petroleum.

Secretary **Herrington**. Both you and the chairman have made the point that the oil and gas industry is more of a national security industry, too. I agree with that.

Senator **Johnston**. Well, good. We are marching down the road together.

Again, as a proponent of the modified free market, and as one who strongly urged deregulation of crude and natural gas back from the year 1, and I am glad we did it—to say, as you do on page 2 of your statement that, "Today, 5 years later we have exactly the consequences we predicted as a result of the free market, more adequate supplies and cheaper energy. This remarkable energy transformation was part and parcel of our economic recovery since 1981."

To be fair about it, domestic production has really not gone up since that time, since deregulation, has it?

Secretary **Herrington**. I think I stated a minute ago, and I think it is accurate; it was the highest in 1985, in history.

Senator **Johnston**. Well, actually, the figures are—1985 was 8.9 million barrels; that is less than 1973; 1980 average was about 8.6. If you correct for Alaska, the lower 48 production is actually less, and certainly no more. The point is, we cannot count on that free market to elicit these great supplies because it hasn't worked.

The point is that we have a very vital national resource here, and that all of us—you and I and the President and everybody else—are willing to modify that free market to be sure today when we need it.

Now, have you made any studies so that at any given price levels you can determine how much of American domestic production is taken out of production? I do not know whether it is possible to do.

Secretary **Herrington**. I haven't seen anything that I have a lot of confidence in, but we do have some studies.

Senator **Johnston**. Assume today's price levels continue for a year, how much of American domestic production would be taken out on a rather permanent basis. Do you know?

Secretary **Herrington**. I would like to submit that for the record. I would be hesitant to estimate. I think there will definitely be a decrease, but the magnitude, I could not tell you.

[The information follows:]

Based on preliminary analysis, at $12 per barrel about 500 thousand barrels per day (b/d) of domestic crude oil production would become uneconomic. Consequently, if prices were to remain at $12 per barrel for a year, lower-48 production would decline by approximately 500,000 b/d during this period. However, the permanent loss of production would be much less. If prices start to increase a year from now many of the shut-in wells could begin producing again.

Senator **Johnston**. I recognize the difficulty of the question and the answer, but I think it is very vital. We are seeing in my State now, the rig count is just continuing to drop. It is less than a third of what it was in 1981, and it is dropping like a rock. I think a lot of this drop—I can tell you only because of what I think and not because of what I know or what I can prove. What I think is a lot of that is going to be relatively permanently taken out of the market.

At least after the passage of a period of time, these rigs are not going to be able to be refurbished and put back after they rust out there. Rigs are selling for less than 10 cents on the dollar, as is a great deal of this equipment. Some of it is being cut up and scrapped. Geologists are leaving and going into accounting or some other profession.

We are seeing a rapid contraction of the energy industry so that when this market does turn around, you will not be able to get that immediate response. Indeed, in 1973, when the price went up or when it was deregulated in 1980, we did not see an immediate response. It took a long time to get up a head of steam. I think it will take even longer next time.

Now, Mr. Secretary, I have heard a figure that has almost risen to the level of accepted truth, that if we put on an oil import fee, that about 30 percent of that would be absorbed by the countries which export into the United States. Do you have a view on that?

Secretary HERRINGTON. I think if we put a $5 fee on, an analysis shows about a $3 price increase would be felt by consumers. I think that is roughly one-third absorbed by producers. Your price, or actual impact, would be about $3 if you had a $5 fee. So producers would absorb two-fifths.

Senator JOHNSTON. We could put on a $5 fee, and you could have $2 of that fee paid by foreign producers?

Secretary HERRINGTON. I think that is accurate.

Senator JOHNSTON. Why is not that just a wonderful thing? To have our foreign friends pay our taxes?

Secretary HERRINGTON. Well, there are several points. No. 1, you are raising the cost of energy to American consumers, and——

Senator JOHNSTON. What if you only raise it $3?

Secretary HERRINGTON. Why do you want to raise it at all? If you are a citizen of a foreign country and you watch America's energy costs go up $3, and you are competing with American industry that is energy-intensive, aren't you standing up and applauding and saying—America did it to itself, again.

Senator JOHNSTON. No; because, in the first place, those industries which import for export, I think that is one of those exemptions we could properly put on. I think there is a difference there. I mean, someone who imports crude and exports refined product, for example, on a barrel-for-barrel basis, I think that certainly could and should be exempted.

There are, of course, certain kinds of exported goods that have a lesser degree of petroleum in them which might be difficult to exempt, but clearly those which are principally petroleum could be exempted.

I would appreciate it if you would reexamine that question of the 30 percent because, frankly, it doesn't make a lot of sense to me. I have heard it from the Venezuelan Ambassador, who came into my office, and who said, "Well, at least that 30 percent we would have to absorb, and we are your good friends, and you shouldn't discriminate against us." I am sure the Canadians and Mexicans would say the same thing.

I do not understand why that would be. It seems to me that the market would say that the price would be set by supply and demand, and not by the desire of someone to make a contribution of 40 percent of the tax to the United States. I wish you would relook at that and put an answer in the record as to why that would be.

Secretary **Herrington**. Yes, sir. I would be happy to.

[The information follows:]

An oil import fee will not raise prices by the full amount of the fee imposed because of supply and demand responses to the fee. Such responses include efforts by foreign producers to maintain market share by lowering prices, domestic supply increases, and demand reductions due to the increased price. The direct effect of a fee would be to raise domestic oil prices, but any price rise will set in motion supply and demand responses. Higher prices will result in a higher U.S. production level than otherwise would occur, and will also work to reduce U.S. demand for oil. The combined effect of these two forces will be to reduce the U.S. demand for oil imports. A reduced demand for U.S. imports will put downward pressure on world oil prices. In an attempt to lessen the effect of reduced oil demand on oil producer revenues, producers will lower their prices slightly in order to avoid part of the quantity reduction.

Prior studies of import fee proposals have examined the question of what part of an import fee is offset by producer responses to price changes. A study by the Congressional Budget Office in 1982 assumed that 1/3 of the fee imposed would be offset by price reductions. A study by the Energy Information Administration in 1982 assumed that 1/4 of the fee imposed would be offset by producers. The estimate that $2 of a $5 fee would not flow through to oil prices is a little higher than the 1/3 to 1/4 estimates, but it is of the same general magnitude, and reflects the same theory of producer price responsiveness.

With any fee, even if world oil prices decline somewhat following imposition of the fee, it is important to remember that oil prices paid by U.S. consumers would exceed the prices paid by consumers in other nations by the full amount of the fee, thereby raising America's costs of production and reducing America's competitiveness in world markets.

Senator Johnston. One final question. At the time you first proposed the deferral on the SPR, you indicated and the administration indicated that you would continue to follow that issue and that it was not—do you recall, we had a question on whether it was a moratorium or whether you stopped it altogether, and you said, no, it is a moratorium because we are going to reexamine that.

Secretary Herrington. I remember that discussion.

Senator Johnston. Is the time now to reexamine, and what kind of factors would cause you to reexamine and change your mind?

Secretary Herrington. The time to reexamine is now, and I have asked for an analysis in our Department of what effect lower prices would have on the SPR fill and how it would be used and what levels. I believe—I don't want to prejudge the answer, but I do think there have been radical changes in the oil price and I think we should be reexamining this and we are in fact underway as of Monday, when I returned from the Far East.

Senator Johnston. Well, that is good news and I would suggest that it be coordinated with the people at the State Department. I mean, if we are going to give aid to the Mexicans, and I think they are a very good candidate for some kind of help—the most direct help and the help that does us the most good is to buy oil from the Mexicans for the strategic petroleum reserve.

It is just as good for their economy as a direct foreign aid grant, but it is a whole better for ours.

Secretary Herrington. There have been other proposals, too, such as possibly holding oil in there as security for further loans, for buying oil, or some other things that have been talked about. I don't want to signal by this testimony that the administration has changed position. All I want to say today in front of this committee is, as Secretary of Energy, I am concerned that analysis has not been done with recently reduced price factors, and it needs to happen and so we are going to do it.

Senator Evans. Well, that is good news. Thank you, Mr. Chairman.

The Chairman. I might just note in that connection, and I should have noted earlier, with respect to our targets for SPR, you have indicated and other experts have said that 60-day supply is what we ought to be aiming for. I think I correctly state it.

Secretary Herrington. I think what I recall in the debate in the 1970's, what I read about it, you were talking somewhere between 90 to 120 days—there are a lot of experts on a lot of sides.

The Chairman. But if we look at the 1995, 500 million barrels per day is 60 days of supply.

Secretary Herrington. If you assume radical imports, then you are talking about changing the numbers on SPR and I think that is one of the things we are looking at.

The Chairman. That is not a radical change.

Secretary Herrington. At the beginning of the hearing, you were talking about 50 percent by 1995.

The Chairman. And while you remaked that they are indeed independent, I don't think you would characterize them as radical.

Secretary Herrington. That is a radical change.

The Chairman. Are EIA's estimates radical?

Secretary **Herrington**. No; I don't want to say that this morning.

The **Chairman**. Just radicals making the estimates.

Senator **Evans**. Mr. Chairman, I know we have many other witnesses and I do not want to extend this. Just one comment, from testimony last week—let me just read a phrase and see if you are concerned at all about it. Saudi oil product imports to the United States jumped from 27,000 barrels a day last September to 642,000 barrels per day in December, the latest month for which we have data.

Does that concern you at all?

Secretary **Herrington**. Absolutely.

Senator **Evans**. I listened with some fascination to a discussion of a semifree market, or what a free market really is. Let me not ask you for now, but I would really be interested to know, given the oil shock of the early 1970's, at the time that it occurred, would you care to draw a scenario, as I say it would be fascinating to have it in writing, a scenario of what actions we might have taken at that time that would have kept us from seeing the cost-of-living increases and the interest-rate increases, the economic disruptions that we saw during the latter half of the 1970's.

Secretary **Herrington**. I would be pleased to submit that for the record, if I could.

[The information follows:]

The Administration's firm commitment to policies that give the domestic oil and gas industry the freedom to respond competitively to changing market conditions provides large economic benefits to the Nation both before and during potential supply disruptions. In 1981, President Reagan eliminated federal controls on U.S. oil production and marketing. The far-reaching and beneficial effects of that single action include increased domestic oil production, reduced dependence on foreign oil, lower prices for oil consumers, and greater economic growth for our Nation. Avoidance of controls in the 1970's would have resulted in lower oil prices, lower inflation and higher economic growth during that decade.

From 1971 until 1981, Federal price and allocation controls held U.S. oil production below its potential. As a result, the U.S. became overly dependent on expensive and insecure supplies of foreign oil. Federal price and allocation controls also reduced competition in oil refining and marketing, thereby contributing to higher oil prices and shortages --including gasoline lines.

Under price controls, total U.S. crude oil production began to decline at an average rate of 1 percent per year. In the five years since decontrol, U. S. crude oil production has actually increased an average of 1 percent annually. In the year prior to decontrol, U.S. crude oil production had declined to 8.6 million barrels per day (b/d). By 1986, crude oil production was over 300 thousand b/d higher than in 1980. If price controls had remained in effect and domestic production had continued to decline at 1.0 percent per year, the U.S. would have produced 600 million barrels less oil in the last five years than it actually did.

U.S. dependence on costly and insecure oil imports soared under price controls. Net imports reached a peak of 8.6 million b/d in 1977 or 46 percent of U.S. oil consumption. This high level of import dependence greatly exacerbated the adverse effects of the supply shortage caused by the Iranian Revolution. In 1980, U.S. net oil imports were 6.4 million b/d. The oil imports cost the U.S. economy about $74 billion per year. Following decontrol, net imports declined to 4.3 million b/d in 1985. This reduction allowed U.S. payments for foreign oil to fall by over 30 percent.

During supply disruptions, free market policies would reduce uncertainties about supply availability and allow the market to adjust rapidly and smoothly to the disruption. Federal price and allocation controls, however, exacerbate the costs of disruptions by increasing uncertainties about whether supplies will be available and where they will be distributed. Below is a listing of some of the ways that price and allocation controls increase the costs of disruptions.

o Subsidize U.S. oil imports. Imports and world oil prices would be higher and payments to foreign oil producers greater than otherwise.

- Discourage domestic stockpiling, production of crude oil and oil substitutes, and maximum output of high valued refined products. Controls can cause severe localized shortages due to misallocation of available supplies.
- Discourage production of the most valuable refined products and delivery of those products to areas of high demand. Limitations on refiner and retailer profit margins destroy the mechanism by which the market determines the kind and amount of products that should be made and where those products are needed most.
- Encourage hoarding by consumers. High costs are imposed on consumers related to search, inconvenience, and pervasive uncertainty about the availability of supply. Consumers engage in "topping" of gasoline tanks and other attempts to increase inventories because that is cheaper than the alternative of searching and waiting in lines. In the absence of price controls, consumers would incur little or no increased costs of search and uncertainty and, thus, hoarding would be reduced.

Past experience with price and allocation controls also provides ample evidence that these regulations artificially increased the costs of disruptions. Below is a listing of some of the actual experiences in which price and allocation controls raised energy costs.

- In 1973-74, allocations to states did not keep pace with rapidly changing population and consumption patterns. Fast growing states like Florida and California suffered more than other states because their allocation shares based on 1972 consumption did not accurately reflect their larger share of U.S. consumption in 1973.
- In 1973-74, the government made gasoline shortages worse by allocating a smaller percentage of the limited available supplies of crude oil to gasoline and more toward home heating oil on the mistaken assumption that the winter of 1973-1974 would be colder than it turned out to be.
- In 1979-80, consumer expenditures for gasoline exceeded market prices by at least 15 to 20 cents per gallon. These higher expenditures include search and queuing costs imposed by controls.

- In 1979-80, centralized allocations, based on the reference date of October 1978, resulted in inadequate gasoline supplies in vacation sites in June 1979. When DOE increased allocations to rural and resort areas in July 1979, the public had already cancelled vacation plans to those areas. The subsequent shortages experienced in some major cities were much greater than the shortfall of oil in the world oil market, while gasoline supplies were abundant in many rural and resort areas.

Senator EVANS. Yes; well, that is what I would like to do. Just one other question. You mentioned some of the things you would do in terms of developing energy policy; simplifying nuclear power, which as I have said before, is fine. I thoroughly agree with it.

It is not going to give us, I am sure you would agree, instant or even reasonably rapid response to an energy crisis. Isn't that correct?

Secretary HERRINGTON. I would agree with you. The point is, even if we needed nuclear power, suppose the price rose to $40–$50 range, or back up to the $30's where it was, the infrastructure for development of nuclear power does not exist.

Senator EVANS. I thoroughly agree with that. All I am trying to get at is that in a free market, you have some alternatives and some way to respond. In the energy market, at least as we have seen it in the last 15 years, prices change much more rapidly than our ability to respond and severe economic disruptions occur in the meantime and if you let the free market totally operate, I suppose that is all right. I presume under those circumstances, when we had the first disruption and it drove at least one American automobile company to bankruptcy, you would not have given Chrysler a Government loan at that point? Let the free market take them down?

Secretary HERRINGTON. You are asking me if I would have approved the Chrysler loan?

Senator EVANS. Yes.

Secretary HERRINGTON. I am just not qualified to say that. I wasn't here. I read a lot about it, as any other citizen did, but as far as what their balance sheet said, I only know what I read in certain magazines and newspapers. Very conceivably, I might have been on either side of that.

There were some other loans that we made——

Senator EVANS. Let us put it this way: If failure of the loan would have driven Chrysler out of business, but that was the free market operation at the time—they did not have automobiles sufficient to meet the needs of people at that point—would you have allowed the free market to work?

Secretary HERRINGTON. Senator, I can't second-guess the Chrysler decision. I don't know enough about it.

Senator EVANS. Just one final question. You mentioned as one of the other elements that you would carry on is the development of clean-coal technology, and presumably the research and development into alternative energy sources, which is an important element as you look toward the future.

Why, then, has the Department deferred essentially all—and we have had two separate people up here testifying to the same thing from the Department—that the deferrals, especially in the energy research and development area, represent all of the additions Congress made during fiscal year 1986 budget. All of the additions, at least in the view of Congress, aimed at trying to provide broadened opportunities for energy sources, and all of those were deferred by the Department.

Does that make any good sense in the kind of future you seek for energy sufficiency?

Secretary Herrington. I think that I testified earlier, that our energy budget is a balanced budget. Yes; it is lean and I think I characterized it as being sharply focused. But the decisions we made on deferrals and on proposals for expenditures, I think we're mostly driven by the budget, the deficit reduction package, and the Gramm-Rudman requirements.

Sure, I would like to see more money in certain programs, but I am not sure we can afford it, and I know there are a number of people on this committee that say you can't afford not to. That is the area of debate.

Senator Evans. Why was it that the choices, however, on deferral only applied—only applied—to just those precise areas where Congress had made some additions in energy research and development, and no others?

Secretary Herrington. I think the President is required under the law—and I guess on the double deferral we are going to find out what the law really is—the President is required under law to submit the budget up as he sees the budget should be—and I think that is what we have done—not necessarily what would satisfy the congressional interests, and then work through the budgetary process until he signs a bill or does not sign it.

Senator Evans. That is fine, prospectively, but we are looking retrospectively. We are looking back on deferrals from the 1986 budget, which the President did sign. So, he is now making——

The Chairman. Would the Senator yield?

Senator Evans. Yes.

The Chairman. I do not want the Secretary to miss the thrust of the question and his response would indicate perhaps he is. After the administration sent the budget up, the Congress acted on it and after it was acted on, it was signed by the President. And the program that ultimately became law was somewhat different than that which was submitted by the administration in the first place.

When the deferrals come along to cut out the money, all of the congressional add-ons were deferred or proposed for deferral, and none of the administration proposals were.

Now that is not quite technically, absolutely accurate, but it is so close——

Senator Evans. It is over 98 percent accurate.

Secretary Herrington. I think that is accurate.

The Chairman. I think the Senator's question is Why did the administration choose to defer only to the congressional changes in the budget proposal?

Secretary Herrington. I think the administration put up the budget they wanted to see passed by the Congress, not singling out any special add-on, or non-add-on, but I think some of the add-ons were not in keeping with programs that the administration wanted to see go through.

Senator Evans. Why did not the President veto the budget then?

Secretary Herrington. I cannot answer that, Senator. I think Gramm-Rudman interfaced between the first budget and the second. Gramm-Rudman came in November-December 1985. I think that changed a lot of things.

Senator Evans. OK.

The Chairman. Thank you, very much, Mr. Secretary.

Next, we will hear from a panel consisting of Mr. Dennis Ross, Department of the Treasury; Mr. Allan Wendt, Department of State; Mr. Bruce Wilson, U.S. Trade Representative's Office.

Gentlemen, your prepared statements will be placed in the record, and you are invited to summarize or highlight those statements in any way you wish. Mr. Ross.

## STATEMENT OF DENNIS E. ROSS, TAX LEGISLATIVE COUNSEL, DEPARTMENT OF THE TREASURY

Mr. Ross. Thank you, Mr. Chairman. I have, as you said, submitted a detailed statement for the record, and I will simply summarize the points made in that statement in my oral testimony.

I am pleased to have the opportunity to present the Treasury Department's views on various proposals for imposing a fee on imported petroleum and refined products.

Mr. Chairman, imported petroleum is currently subject to tariff at rates ranging from 5 cents per barrel for certain crude oil, to 84 cents per barrel on certain refined products. These relatively small charges, imposed under the Tariff Act of 1930, do not significantly affect the cost of oil or refined products.

As you know, a number of bills have been introduced in the Senate which would either substantially increase the existing tariff or impose new taxes on imported oil. Although there are significant differences in the approach and taxing mechanisms of these different bills, they have the common characteristic of imposing a substantial fee on imported oil.

My written statement provides detailed descriptions and 5-year revenue estimates for S. 1412, a bill sponsored by Senator Hart, S. 1507, a bill sponsored by Senators Boren and Bentsen, and S. 1997, a bill sponsored by Senators Wallop and Bentsen. Each of those bills proposes a fee on imported oil. Although there are again significant mechanical differences in the bills, each of the proposals has the potential to raise very substantial revenue.

The recent interest in an oil import fee relates in part to this revenue-raising potential, but oil import fee proposals have also been motivated by concerns over the health of the domestic energy industry in a time of falling world oil prices. The recent dramatic fall in those prices follows a period of several years in which prices have declined on a steady basis. This downward trend has already forced the domestic oil industry to adjust to narrowed profit margins and a falloff in drilling activity. If these trends and the very rapid recent fall in world oil prices continue, the health of the domestic oil industry could be affected.

By imposing taxes solely on imported petroleum, an oil import fee would generally increase the prices of domestic energy and refined products above the prevailing world prices. Because the prices of all energy sources are to some extent interrelated, the prices of other domestic energy sources would also be increased.

This would offset, to some extent, the effects of falling oil prices on the domestic energy industry and thus could at least stem the reduction in exploration and development activities resulting from lower prices.

Although it is true that an oil import fee would benefit important segments of the domestic energy industry, it would in general have significant adverse effects on nonenergy domestic businesses and industries. Most seriously affected would be industries that are heavy energy users, or that rely significantly on petroleum feedstocks; in particular, domestic manufacturers of products such as plastic, glass, cement, paper, limestone steel, textiles, aluminum, chemicals, and paint would face substantially higher costs. The higher energy costs that would result from an oil-import fee would make it difficult for many domestic industries to retain existing markets for their products, both at home and abroad.

Foreign producers of comparable goods would benefit from falling energy costs, while U.S. energy prices would remain at a relatively higher level because of the oil-import fee. Thus, the net effect of an oil-import fee could be to worsen our balance of trade position.

Although it is extremely difficult to determine precisely how higher energy costs resulting from a tax on imported oil would be distributed through the economy, we believe that a substantial share of those costs would be borne by consumers through higher prices for gasoline, and, depending on the scope and effectiveness of any exemptions from the fee, higher prices for home heating oil, and electricity generated through the burning of residual fuel oil.

Moreover, because prices for almost all sources of energy are interrelated and depend to a great extent on the prevailing price of oil, consumers would face increased costs for purchases of other sources of energy, including natural gas, and to a lesser extent, electricity generated by burning coal or natural gas.

These increased energy costs for consumers raise special concerns because low-income families spend a relatively large portion of their income on energy consumption. Families with incomes below $12,000, for example, spend approximately 25 percent of their income on gasoline, fuel, and other energy uses, while families with incomes above $42,000 spend less than 7 percent of their incomes on such items. Consequently, a tax that increases energy costs, such as an oil-import fee, tends to be regressive in its effects, taking a relatively greater share of income from the poor and middle class.

My written statement, Mr. Chairman, contains a more detailed analysis of the distributional effects of the oil-import fees proposed in S. 1412, S. 1507, and S. 1997. My statement also indicates that although there are ways in which the regressive effects of an oil-import fee might be corrected, such as by exemptions for certain uses of oil, or by tax credits for low-income families, there would be substantial administrative and regulatory costs in any such approach.

An oil-import fee would also have a disproportionate impact on certain regions of the United States that consume more energy or different types of energy than other areas. Families in the Northeast, for example, consume more energy than families in other regions, and thus they would face a disproportionate share of the higher energy costs that would result from an oil-import fee. Although it may be possible to exempt certain uses of imported oil from the fees so as to even the regional burdens, there would again be substantial administrative costs in that approach.

My written statement provides additional analysis and a table concerning the regional effects of an oil-import fee.

Finally, Mr. Chairman, an oil-import fee raises a number of concerns relating to foreign policy, including its effects under GATT and under our bilateral agreements with several oil-exporting countries. My written statement considers these issues in some detail and I will defer to the other members of the panel for oral consideration of these matters.

In conclusion, Mr. Chairman, there are both advantages and disadvantages to the imposition of an oil-import fee. Previously, the administration had considered whether an oil-import fee might appropriately be included as part of a revenue neutral tax reform proposal. After additional study, the administration has concluded that, on balance, the cost of a fee outweigh its benefits, and accordingly, the administration is opposed to the imposition of a fee on the importation of crude oil or refined petroleum products.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Ross follows:]

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STATEMENT OF
DENNIS E. ROSS
TAX LEGISLATIVE COUNSEL
DEPARTMENT OF THE TREASURY
BEFORE THE
COMMITTEE ON ENERGY AND NATURAL RESOURCES
UNITED STATES SENATE

Mr. Chairman and Members of the Committee:

The Committee is today considering the domestic and international petroleum market, and the policy implications of oil import fees. I am pleased to have this opportunity to appear before you and discuss the Treasury Department's views regarding the imposition of fees on the importation of crude oil and refined petroleum products. In particular, I will concentrate on the tax policy issues raised by various proposals to impose an excise tax or tariff on crude oil and refined petroleum products imported into the United States. Other members of the Administration will discuss the economic, energy, and foreign policy ramifications of oil import fees and the current oil market.

## Background

**Tax Provisions**. There are presently a variety of specific taxes applicable to crude oil and refined petroleum products. Under the Crude Oil Windfall Profit Tax Act of 1980, a Federal excise tax is imposed on certain domestic crude oil. In general, the amount of the tax depends upon certain characteristics of the oil, such as when it was discovered and its method of production, and the difference between the value of the oil upon removal and statutorily specified base prices. Because the removal price of oil has been falling, while the inflation-adjusted base prices have been increasing, the revenues generated by the windfall profit tax have been rapidly declining. 1/ The tax is scheduled to phase out over a 33-month period beginning in 1991. 2/

Imported crude oil is not subject to the windfall profit tax. Under the Tariff Schedules of the United States, however, a tariff is imposed on imported crude oil and certain refined petroleum products at rates ranging from approximately five cents per barrel on certain crude oil (0.125 cents per gallon) to 84 cents per barrel on certain refined products (two cents per gallon). A higher rate applies to products imported from certain communist countries, and some refined products may be imported from Canada without any duty. These tariffs, which are imposed under the Tariff Act of 1930, are not designed principally to raise revenue and do not significantly affect the cost of oil or refined products. 3/

Finally, Federal excise taxes, at rates ranging from three cents per gallon to 15 cents per gallon, are imposed on gasoline and other fuels. These excise taxes do not increase general revenues, but are dedicated to the Highway Trust Fund, the Airport and Airway Trust Fund, and the Inland Waterways Trust Fund. The Highway Trust Fund excise taxes are currently scheduled to expire on September 30, 1988, and the Airport and Airway Trust Fund taxes are scheduled to expire on December 31, 1987.

Energy Consumption. The percentage of U.S. energy consumption supplied by imported crude oil and refined petroleum products has been declining since 1977, when nearly 48 percent of our gross oil supply was produced abroad. By 1981, our reliance on imported oil and oil products had declined to 36 percent of domestic consumption. This trend continued in 1985, during which 31 percent of U.S. gross oil consumption was supplied by imported products. Net imports in 1985 represented only 27 percent of domestic consumption.

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1/ During 1984, the windfall profit tax raised $3.9 billion in net revenues. If the removal price during 1986 averages $18 per barrel, the revenue raised by the windfall profit tax will be negligible.

2/ Under the applicable statutory provisions, the phase-out period would begin in 1988 if the cumulative net revenues raised by the tax exceeded $227.3 billion. Under current assumptions regarding oil prices, however, the phase-out period will not begin before January 1991.

3/ In addition to the general Tariff Schedules of the United States, the President has authority under the Trade Expansion Act of 1962 to impose oil import fees or other restrictions if he finds that imports threaten national security. This authority, which has been used several times, is subject to Congressional override.

## Description of Pending Oil Import Fee Legislation

There are presently three bills introduced in the Senate that would in varying ways impose excise taxes or increased tariffs on imported oil and refined petroleum products. Although the Committee is not considering any specific bills, I believe it would be helpful to describe the pending legislation in full.

S. 1507, sponsored by Senators Boren and Bentsen, would increase the existing tariff on imported crude oil by $5 per barrel, and would increase the existing tariffs on refined petroleum products by $10 per barrel. The $5 additional tariff on crude oil would begin to phase out when the average world price of crude oil, as determined quarterly by the Secretary of Energy, reached $25 per barrel, and would be eliminated when the average world price reached $30 per barrel. Similarly, the $10 additional tariff on refined products would be phased out for each product as the average world price of the particular product moved from $25 per barrel to $35 per barrel.

The increased tariffs imposed by S. 1507 would be refunded with respect to any barrel of crude oil or refined petroleum product that was used as heating fuel or in the production of heating fuel. In addition, the tariff would be refunded for any crude oil or refined petroleum that was "necessary and inherent" to the manufacture of any products destined for export. In each case, the bill contemplates that the Treasury Department would, by rules and regulations, provide the procedures under which qualification for a refund of the tariff would have to be proven.

Finally, S. 1507 would express the sense of the Congress that the net increase in Federal revenues resulting from the new tariffs should be used to reduce the Federal budget deficit.

S. 1997, sponsored by Senators Wallop and Bentsen, would impose a new excise tax on the first sale or use within the United States of crude oil or refined petroleum products that have been imported. The amount of the excise tax on each barrel of imported crude oil would be equal to the excess, if any, of a statutorily prescribed floor, set initially at $22 per barrel, over the average world price per barrel of crude oil. The amount of the floor, sometimes referred to as the "survival price" of oil, would be increased annually to account for growth in per capita nominal gross national product. 4/ The average world

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4/ The GNP-adjusted reference price would be rounded off to the next highest dollar. Based on current budget projections, this annual increase would average approximately six percent per year over the fiscal 1986-1991 budget period.

price of crude oil would be determined quarterly by the Secretary of the Treasury in consultation with the Secretary of Energy, based on the average per barrel prices for three principal classes of foreign crude oil. 5/

The amount of the excise tax imposed under S. 1997 on each barrel of imported refined petroleum product would be equal to the per barrel excise tax on imported crude oil, increased by a $3 per barrel "environmental outlay adjustment," 6/ and multiplied by a barrel of oil equivalent factor. This factor appears to be the ratio of the Btu content of a barrel of refined product to 5.8 million Btu, the Btu content of a barrel of oil. Thus, for example, if the average world oil price were $16 per barrel, the excise tax on a barrel of imported motor gasoline, which yields 5.25 million Btu, would be approximately $8.15. 7/

S. 1997 would exempt from the tax any refined products imported for use as home heating fuel. Unlike S. 1507, however, the bill would not exempt from tax imported crude oil that is imported and refined for use as heating fuel. Further, the bill would provide exemptions for residual fuel oil and topped crude oil imported for further refining, for "process fuels," and for liquid natural gas. While the scope of the "process fuels" exemption is not clear, it would presumably apply to petroleum products used in certain industrial applications. Finally, S. 1997 would exempt from the new excise tax any crude oil or refined petroleum product that was sold for export within six months following its importation.

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5/ The three classes of foreign crude oil are Rotterdam brent crude, Saudi light, and North Sea forties.

6/ The environmental outlay adjustment would be increased annually to account for per capita GNP growth in the same manner as described above with respect to the statutory floor on the price of oil.

7/ The $8.15 excise tax on a barrel of motor gasoline would be computed as follows:

| | |
|---|---|
| Reference price | $22 |
| World oil price | ($16) |
| Tax on crude oil | $ 6 |
| Environmental Outlay Adjustment | $ 3 |
| Tentative refined product fee | $ 9 |
| "Barrel of oil equivalent" factor (5.8 Btu ÷ 5.25 Btu) | x .905 |
| Motor fuel excise tax | $8.15 |

S. 1412, sponsored by Senator Hart, would increase the existing tariff on both imported crude oil and refined petroleum products by $10 per barrel. Thus, unlike S.1507 or S. 1997, the bill would not impose a higher fee on refined petroleum products than on crude oil.

S. 1412 does not by its terms exempt any types of petroleum, such as home heating fuel, from imposition of the oil import fee. Under the bill, however, the Departments of Health and Human Services and Energy would determine the monetary effect of the fee on lower-income families and individuals. An equivalent amount of the revenue raised from the import fee would be used to increase funding for Federal aid for such people. The remaining revenue for the fee would be used to reduce Social Security taxes.

## Discussion

Although the bills described above differ in various respects, they share the obvious characteristic of imposing a fee on most imported oil and refined petroleum products, and thus raise a series of common considerations. Except as otherwise indicated, the discussion below applies to each proposal.

We face today crude oil prices that have fallen dramatically. The spot price for West Texas intermediate crude oil, for example, closed last Thursday at $12.80 per barrel. The falling price of crude oil, its effect on the prices of refined petroleum and other sources of energy, and the effect of these price reductions on both the economy in general and on particular regions of the country are the backdrop against which the merits of increasing the fees on imported oil must be considered.

**Effect on Federal Revenues**. The potential revenue raised by the imposition of a tax on imported oil and refined petroleum products varies with the details of the particular proposal. Our analysis shows that the overall revenues (including windfall profit tax collections) raised from a fixed fee or excise tax on imported oil are not acutely sensitive to the precise level of world oil prices. Thus, a fixed per barrel excise tax on imported oil would raise roughly the same amount of revenue regardless of whether the world price of crude oil was $20 or $25 per barrel. S. 1507 and S. 1997, however, would establish a fee that is explicitly dependent upon the level of world oil prices. Accordingly, the revenue raised by these proposals, unlike the fixed fee proposed by S. 1412, would be highly sensitive to changes in the world oil price.

Assuming an October 1, 1986 effective date and oil prices that remain $4 per barrel below the Administration's latest forecast, 8/ and assuming all other elements of the forecast are not affected by the imposition of the fee, we estimate that S. 1507, which would impose a $5 per barrel tariff on imported crude oil and a $10 per barrel tariff on imported refined products, would increase revenues by approximately $35.7 billion over the fiscal 1987-1991 budget period. 9/ Because, however, the tariff is phased out as the world price of oil increases from $25 to $30 per barrel and the world price of refined products increases from $25 to $35 per barrel, this revenue would not be realized if the current decline in world prices were reversed and prices rose again to their former levels.

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8/ The latest Administration forecasts, prepared in December 1985, assume that crude oil prices will be as follows:

| Year | Price per barrel |
|---|---|
| 1986 | $24.76 |
| 1987 | 23.98 |
| 1988 | 23.55 |
| 1989 | 24.07 |
| 1990 | 24.95 |
| 1991 | 25.37 |

9/ The $35.7 billion estimated to be raised consists of $31.2 billion in net oil import fees (which reflects a reduction in imports resulting from the fee) and $4.5 billion in additional net windfall profit tax collections. This estimate of the revenue effect of S. 1507 takes into account the exemptions contained in the bill for heating fuel, and oil or refined products used in the manufacture of goods destined for export. If the exemption for home heating fuel were deleted, we estimate an additional revenue increase of $5.7 billion per year. Deletion of the exemption for oil and refined products used to manufacture exports would increase the revenue gain by approximately $1.2 billion.

Again assuming that the average world price of crude oil remains $4 per barrel lower than the latest Administration economic forecast, that all other elements of the forecast are not affected by the imposition of the fee, and that the bill becomes effective on October 1, 1986, we estimate that S. 1997 would raise approximately $26.0 billion over the five-year budget period. 10/

The provisions of S. 1997 raise even greater uncertainty than those of S. 1507 in estimating likely revenue effects. Whereas the revenue raised by S. 1507 would be relatively stable so long as oil prices remained below $25 per barrel, the fee imposed and revenue raised by S. 1997 would fluctuate with increases or decreases in the price of oil. Given the volatility of oil prices and the influence of foreign governments on these prices, the taxing mechanism provided in S. 1997 would not provide a stable source of revenue over any extended period. Moreover, similar to the operation of S. 1507, S. 1997 would cease to raise revenue if the average world price of oil exceeded the adjusted reference price.

Using the same assumptions as for S. 1507 and S. 1997, we estimate that S. 1412, which would impose a flat $10 per barrel additional tariff on imported oil and refined petroleum products, would increase revenues by approximately $75.6 billion over the five-year budget period. 11/ In contrast to S. 1507 and S. 1997, which would phase out the fee if the price of oil rose above specified prices, the revenues raised by S. 1412 would be relatively stable regardless of fluctuations in oil prices.

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10/ The $26.0 billion revenue estimate consists of $19.4 billion in net oil import fees (which reflects a reduction in imports) and $6.6 billion in additional net windfall profit taxes. Our estimate of the revenue effects of S. 1997 reflects our interpretation of each of the exemptions contained in the bill. If the provisions of S. 1997 were applied without the exceptions for home heating fuel and certain other petroleum products and for petroleum products exported within six months of importation, we estimate that an additional $24.3 billion would be raised during the budget period.

11/ We note that the revenue raised through imposition of the oil import fee under S. 1412 would be expended to increase Federal expenditures for certain programs designed to benefit lower-income persons and to reduce Social Security taxes. In this regard, S. 1412 would not in the aggregate increase or decrease Federal revenues.

National Security Considerations. A viable domestic energy industry is integrally related to our national security. Much of the interest in an oil import fee grows out of concern over the health of that industry in a time of falling world oil prices. The recent dramatic fall in world oil prices follows a period of several years in which prices have declined on a steady basis. 12/ This downward trend in prices has already forced the domestic oil industry, which includes oil-drilling and well-service contractors, oil tool and pipe manufacturers, and many other businesses, as well as oil producers and refiners, to adjust to narrowed profit margins and a fall-off in drilling activity. If the recent and very rapid fall in world oil prices continues, the health of the domestic oil industry could be threatened, with potentially serious effects on the level of exploration and development of our domestic energy resources.

In response to the current climate of falling oil prices, several major oil companies have recently announced substantial reductions in their domestic exploration and production budgets. Similar announcements from other companies are widely expected. Moreover, if the price of oil continues to fall, many of this country's "stripper wells" (i.e., wells producing on average less than ten barrels of oil each day), which comprise approximately 15 percent of domestic oil production, will be made unprofitable and may be abandoned.

Because the prices of other sources of energy are related to the price of oil, reductions in oil exploration and development may eventually spread to other energy sources, such as coal and natural gas. Ultimately, reduced levels of domestic exploratory and developmental activity will lead to reduced domestic production. In the face of both this lower domestic production and greater domestic demand resulting from falling prices, oil imports will increase, leading to greater dependence on foreign oil in the near term.

While a greater demand for oil would generally provide pressure for an increase in oil prices, such prices are now significantly affected by the production policies of the major oil-producing nations. Thus, prices might possibly drop to relatively low levels before heightened demand would cause them to increase. Many producers, drilling contractors, and others dependent upon the oil industry might not be able to survive while waiting for oil prices to rebound.

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12/ In 1981, the average domestic oil well-head price was $31.77 per barrel. This price has been declining steadily until 1985, when it reached $23.88 per barrel.

By imposing taxes solely on imported petroleum, each of the bills described above would generally increase the prices of domestic energy and refined products above the prevailing world prices. Because the prices of all energy sources are to some extent interrelated, the prices of other domestic energy sources would also be increased. Thus, each of the proposals would offset to some extent the effects of falling oil prices on the domestic energy industry. Moreover, the higher price for domestic resources may encourage exploration and development in this country or, at the least, stem the reduction in such activities resulting from lower prices.

General Impact on Business and Industry. The imposition of a tax on imported petroleum, and the consequent increase in energy costs, would have significant adverse effects on non-energy domestic businesses and industries. Most seriously affected would be industries that are heavy energy users or that rely significantly on petroleum feedstocks. In particular, domestic manufacturers of products such as plastic, glass, cement, paper, limestone, steel, textiles, aluminum, chemicals, and paint would face substantially higher costs. The agriculture sector, especially farmers, also would be hurt, since the likely decrease in the costs of fuel and fertilizer resulting from falling world oil prices would be partially or fully offset by the imposition of an oil import fee.

The higher energy costs that would result from an oil import fee would make it more difficult for many domestic industries to retain existing markets for their products both at home and abroad. Foreign producers of comparable goods would benefit from falling energy costs, while U.S. energy prices would remain at a relatively higher level because of the oil import fee. Indeed, many of the industries that would be most affected by higher energy costs have previously complained about the relatively low energy costs enjoyed by some foreign competitors.

The effects described above would have a negative impact on our balance of trade, which could more than offset the positive trade effects of reduced imports of foreign crude oil and refined products that would result from imposition of an import fee. Thus, the net effect of an oil import fee could be to worsen our balance of trade position.

Even if an exemption from the tax were provided for crude oil or refined petroleum products imported to manufacture goods destined for export, as contemplated in varying degree by S. 1507 and S. 1997, it is likely that such relief would be effective in only a limited number of cases, and that the international competitiveness of many industries would still be negatively affected. Although the exemption would benefit vertically integrated producers that directly import petroleum for use in the manufacture of exports, it would be of limited use, at best, for the many independent producers of intermediate and final products. Finally, imposition of an oil import fee would likely hurt independent marketers of petroleum, who cannot rely on increased production income to offset the reduced demand that an oil import fee would likely entail.

Although the effects of an oil import fee on domestic industry would in general be negative, an import fee would aid certain sectors of the domestic energy industry, including the domestic refining industry. Due largely to declines in U.S. petroleum consumption and decontrol of oil prices, we have faced recently a reduction in U.S. operating refining capacity. 13/ Although domestic refiners, like all purchasers of oil, would face the higher energy costs resulting from an oil import fee, they would benefit to the extent a higher fee is imposed on refined products than on crude oil, and a disincentive thus established for importation of refined products. In this regard, it should be noted that S. 1507 and S. 1997, in different respects, would both establish a higher fee on imported refined products than on imported crude oil. Accordingly, both of those proposals would aid domestic refiners.

In addition, we recognize that oil royalties, severance taxes, and other energy-related receipts are a significant source of revenue for some States. Consequently, the fiscal health of these States, which has been hurt by the steep decline in oil prices, would be improved through imposition of an oil import fee.

Rapidly falling oil prices also may have an adverse impact on banks with significant energy loan portfolios. Many such banks have recently made provisions for additional loss reserves and have reduced their volume of new energy loans. Continued instability in oil prices may have more serious effects on such banks, and could trigger some failures. By softening the fall of domestic energy prices, an oil import fee would protect those banks from declines in market prices. On the other hand, imposition of an oil import fee could hurt banks with loans to oil-exporting countries, since the fee could affect the oil revenues flowing to such countries.

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13/ Data compiled by the Energy Information Administration indicate that U.S. operable refinery capacity has declined from 18.62 million barrels per year on January 1, 1981, to 15.7 million barrels on January 1, 1985. This capacity did not decline further during 1985.

**Effects on Energy Consumption**. Higher energy costs have encouraged greater energy conservation, and thus such developments as more fuel-efficient cars and appliances, and the design and installation of more energy-efficient industrial facilities. While these developments may represent more or less permanent changes, a number of other conservation efforts, such as the installation of greater insulation in older homes and the willingness to tolerate lower winter or higher summer temperatures by adjusting thermostats, may well be dissipated by a drop in energy costs.

Policies that raise the prices of energy for consumers, such as an oil import fee, would encourage the continuation of these efforts and would deter energy use. This would be a step toward further reducing our reliance on uncertain foreign supplies.

**Effect on Consumers**. It is extremely difficult to determine precisely how higher energy costs resulting from a tax on imported petroleum would be distributed throughout the economy. To some extent, these costs would be shared by foreign oil producers and refiners, domestic businesses that use energy, and consumers. While tracing the precise incidence of these costs is difficult, consumers would clearly be directly and adversely affected by higher energy prices through purchases of gasoline and, depending upon the scope and effectiveness of any exemptions, home heating oil and electricity generated by burning residual fuel oil. Moreover, because prices for almost all sources of energy are interrelated and depend to a great extent on the prevailing price of oil, consumers would face increased costs for purchases of other sources of energy, including natural gas and, to a lesser extent, electricity generated by burning coal or natural gas. In addition, consumers would indirectly bear higher costs in their purchases of all goods and services, because the higher energy costs that would be faced by producers of energy-intensive basic materials and by the construction and transportation industries would, in turn, be reflected in higher prices generally.

While the effects described above would result from most consumption-based taxes, their nature is altered in the case of an oil import fee, because the Treasury would realize an increase in revenue only with respect to oil imports, while consumers would bear higher prices on all petroleum products and natural gas (and other goods), regardless of whether the oil, natural gas, or refined product was produced in the United States or abroad. Thus, while the burden of the tax would fall upon foreign producers and domestic consumers, the benefits would be shared by the Federal government and the domestic oil industry. In general, our analysis indicates that, based solely on the increase in oil prices, the domestic oil industry would realize after-tax benefits equal to $1.75 for every $1 of tax collected by the Treasury. To the extent that higher oil prices also lead to higher prices for natural gas and coal, the energy industry would realize an even greater share of the benefit in proportion to Federal revenue.

Distributional Impact. Lower income families spend a relatively large portion of their income on energy consumption. Families with incomes below $12,000, for example, spend approximately 25 percent of their incomes on gasoline, fuel, and other energy uses, while families with incomes above $42,000 spend less than seven percent of their incomes on such items. Consequently, any energy tax tends to be regressive in effect, taking a relatively greater share of income from the poor and middle class. The higher energy costs resulting from energy taxes also may lead to higher prices for other consumer goods, thus intensifying this burden on the poor and middle class, although possibly reducing slightly the regressive effect of such taxes.

The distributional impact of oil import fees, depending upon the scope and effectiveness of any exemptions, can be extremely regressive. As detailed in Table 1, for example, we estimate that the $5 and $10 per barrel tariffs imposed by S. 1507, ignoring the exemption provided for home heating fuel, would in 1989 increase energy costs for families with incomes below $10,000 by an average of 2.47 percent of total income. In contrast, the energy costs for families with incomes above $100,000 would increase by an average of only 0.20 percent of total income. When the exemption provided by S. 1507 for home heating fuel is considered, the regressive effect of the tax is reduced, but the energy costs paid by lower income families would still increase by an average of 1.92 percent of income, while the energy costs of the higher income families would increase by only 0.18 percent. The impact of S. 1997, as illustrated in Table 1, is also regressive. Although we have not had an opportunity to prepare a distributional analysis of S. 1412, its distributional impact, ignoring the increased transfer payments and reduced Social Security taxes provided by the bill, would be similar to the other bills. We note, however, that the increased transfer payments and reduced Social Security taxes contemplated by S. 1412 would mitigate its regressive effect.

There are a number of ways to reduce the regressive nature of a tax on imported oil and refined products in addition to the exemptions for home heating fuel, the increased Federal appropriations, or the reduction in Social Security taxes proposed by the three bills. First, the income tax rate schedules could be modified to reduce the taxes paid by those in the income classes that are most seriously hurt by the oil import fee. This solution, however, would substantially reduce aggregate income tax revenues. Moreover, an adjustment to the rate schedules would not help many of the families that are most negatively affected by an oil import fee, namely those who have insufficient income to generate a tax liability.

Second, consideration could be given to targeting relief narrowly to lower income families. In particular, imposition of an oil import fee could be accompanied by enactment of a refundable income tax credit for lower income families. Although a refundable credit might be difficult to design satisfactorily and would undoubtedly pose substantial administrative problems, such a credit would reduce the regressive nature of an energy tax at a relatively moderate revenue cost.

**Regional Impact**. An oil import fee would have a disproportionate impact on certain regions of the United States that consume more energy or different types of energy than other areas. As illustrated by Table 2, the consumption of energy varies significantly by region. Families in the Northeast, for example, consume more energy than do families in other regions. In addition, because the various regions differ in population density and availability of public transportation, they also differ in their use of motor fuels. For example, gasoline consumption is regionally dependent, and tends to be higher in areas outside the Northeast. Finally, the types of fuels used in different regions vary, and those differences contribute to a non-uniform regional impact of an oil import fee.

As suggested by the levels of energy expenditures set forth in Table 2, the burden of an oil import fee, if imposed without any exception, would be felt most heavily in the Northeast. Both S. 1507 and S. 1997 mitigate this disproportionate regional impact by providing exemptions for heating fuel and, in the case of S. 1507, crude oil, that is to be refined into home heating fuel. 14/ This solution, while in concept well-intentioned, raises several concerns.

Exemptions for petroleum used for specific purposes are difficult to administer, will impose bureaucratic burdens on segments of the domestic oil industry, and may offer only limited relief to the affected persons. For example, if an exemption were granted only for home heating fuel, as proposed by S. 1997, a powerful incentive would be created to increase imports of home heating fuel, thus hurting domestic refineries. If this effect were avoided by extending the exemption to crude oil imported for use in refining home heating fuel, as proposed by S. 1507, the exemption would be more effective in shielding the cost of home heating oil from a price increase. The potential revenue increase resulting from imposition of the import fee, however,

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14/ Under S. 1412, the reduction in Social Security taxes resulting from the oil import fee revenues remaining after the increases in Federal funding for certain lower-income programs would be allocated among the States in proportion to the monetary effect of the increased tariff on residents of each State. This provision, which would mitigate the disparate regional impact of an oil import fee, would apparently require the imposition of different Social Security tax rates in various States.

would be reduced considerably. In particular, we estimate that an exemption granted to both crude oil and refined home heating fuel, such as the one proposed by S. 1507, reduces the revenue gained through an import fee by approximately 15 percent.

More significantly, however, the task of monitoring the ultimate use of refined products produced from imported crude oil would be extremely onerous. Such a task is particularly difficult, because home heating fuel is used for commercial heating and also is virtually identical to diesel fuel, which would not enjoy any special exemptions. Finally, we should not underestimate the potential bureaucratic and regulatory burdens that the administration of such exemptions might place on domestic producers, refiners, and heating oil distributors.

The burden of increased residential electric bills, caused by the higher costs of residual fuel oil and natural gas used to generate electricity, also would fall disproportionately on the Northeast. Similarly, natural gas prices would increase commensurately with higher oil prices. The increased cost of heating homes with electricity or natural gas, however, is not addressed in either S. 1507 or S. 1997. In addition, California would be especially affected by an oil import fee, because of its dependence upon oil-generated electricity. A scheme of exemptions for residual fuel designed to offset this impact would lead to greater revenue losses and more administrative problems and bureaucratic burdens than would be created by an exemption for home heating fuel.

**Foreign Policy Considerations**. Any proposal to impose a fee on imported crude oil and refined petroleum products raises a host of foreign policy concerns. As discussed below, the imposition of an oil import fee, depending upon its provisions, would raise concerns under the General Agreement on Tariffs and Trade (the "GATT") and bilateral agreements with several oil-exporting countries. In addition, an import fee, by increasing the price of imported oil and refined petroleum products, would decrease U.S. demand for such oil, and would thus reduce the volume of exports for many countries, some of which are heavily dependent upon revenues from such sales to meet foreign loan obligations. While the effects of such a decrease would vary depending upon the country, it would especially hurt several of our most established trading partners, including Mexico, Canada, Venezuela, and the United Kingdom, each of which supplies a significant portion of our petroleum imports. While exemptions for oil imported from one or more particular countries could be provided to mitigate these consequences, such exemptions would not only raise the treaty concerns discussed below, but also would pose even greater administrative and bureaucratic burdens than an exemption for home heating fuel or other specific uses. Moreover, such exemptions, depending upon the countries involved, could significantly affect the potential revenue raised by an oil import fee. 15/

Administrative Burdens. As noted above, we are concerned that the proposals for various exemptions contained in S. 1507 and S. 1997 would lead to substantial administrative and bureaucratic burdens. In particular, providing exemptions for crude oil or refined products imported from particular countries or for particular uses might necessitate an extensive regulatory and enforcement apparatus. Such regulation could amount to unreasonable Federal government intrusion into the oil business, a role we properly abandoned with the removal of oil price controls in 1981.

Effect of GATT and Other Treaty Issues. We are continuing to study whether the various oil import fee proposals are consistent with our treaty obligations under the GATT and various other bilateral agreements. We have committed ourselves in the GATT not to increase our tariffs on refined petroleum products. 16/ Each of the oil import fees described above would violate these commitments unless one of the GATT exceptions applies. One such exception is national security. We are considering whether, under current conditions, an import fee could be justified as necessary, in GATT terms, for the protection of "essential security interests."

The GATT generally allows other countries to "redress the balance of concessions" if one country imposes new import barriers, even if those restrictions are permissible under the GATT exceptions. If GATT signatories harmed by the oil import fee were to redress the balance of concessions by imposing offsetting duties on U.S. products, this would harm U.S.

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15/ Based on existing import levels, if an exemption were provided for crude oil and refined petroleum products imported from Mexico, we currently estimate a 13 percent reduction in the revenue potentially raised by S. 1997. If exemptions were provided for Canada, Venezuela, or the United Kingdom, we estimate that the revenue would be decreased by 11 percent, 9 percent, and six percent, respectively. Somewhat greater reductions would arise under S. 1507 or S. 1412. Moreover, we note that granting an unlimited exemption for oil imported from certain countries may result in an increase in imports from those countries, thereby magnifying the potential reductions in revenues.

16/ We have made a similar commitment to Venezuela with respect to crude oil in a bilateral treaty. The most favored nation provision in the GATT, discussed below, would preclude the United States from imposing higher duties on GATT signatories than on Venezuela.

producers of such products. One way to avoid other countries redressing the balance by retaliation would be to offer them "compensation" by reducing U.S. trade barriers to other products such countries export to the United States. However, providing compensation by reducing U.S. trade barriers to other products from injured countries would adversely affect U.S. producers of competing products. Compensation could also reduce the net revenue raised from any oil import fee.

If the import fee were applied on a discriminatory basis, by exempting oil imported from certain countries, it also would violate the non-discrimination obligation in the GATT generally known as the most favored nation provision. Moreover, various bilateral Friendship, Commerce and Navigation Treaties, including treaties with some oil-producing countries that are not GATT signatories, contain similar most favored nation provisions. Excepting some countries from any oil import fee would be likely to draw a response from those countries entitled to most favored nation treatment that are not excepted.

*Macroeconomic Effects*. As an oil-importing nation, the United States stands to benefit from the decline in world oil prices. The present decline, if sustained, will likely result in a short-term reduction in the inflation rate and a longer-term reduction in interest rates. The decline in world oil prices is expected to result directly in lower prices for both refined oil products and other fuels. In addition, the cost of many energy-intensive goods, ranging from steel and other metals to glass, ceramic, and plastic products, also would be expected to decline. These macroeconomic benefits resulting from lower oil prices would be diluted if an oil import fee were imposed.

An oil import fee would clearly affect the relative price of goods and services, but the extent of its impact on the overall price level and interest rates would depend, in part, on the response of the Federal Reserve. If the money supply were allowed to increase to accommodate the fee, there would be a short-term increase in the inflation rate, thus offsetting the price reductions that would otherwise result from lower world oil prices. 17/ If the money supply were held steady, however, there would likely be a reduction in labor and capital income. In short, depending upon monetary policy, one might expect either higher prices and a slight decline in real GNP or more stable prices and greater decline in real GNP.

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17/ In addition to its more general effects, the inflationary impact of the oil import fee, if any, might also lead to increased Federal outlays for various entitlement programs that are affected by the Consumer Price Index (CPI) and for interest payments on the national debt.

## Conclusion

As I have indicated throughout my testimony, there are both advantages and disadvantages to the imposition of an oil import fee as proposed in S. 1412, S. 1507 and S. 1997. Previously, the Administration had considered whether an oil import fee might appropriately be included as part of a revenue neutral tax reform proposal. After additional study, the Administration has concluded that, on balance, the costs of an oil import fee outweigh the benefits. Accordingly, the Administration is opposed to the imposition of a fee on the importation of crude oil or refined petroleum products.

## Table 1

Average Per-Family Burden for The Boren-Bentsen Bill (S. 1507), for 1989, Assuming Oil Prices $4 per barrel less than CEA Projections.

| Family Income ($ thousands) | Increase in Oil Expenditures (in dollars) 1/ | | | | Increase in Expenditures as Percent of Family Income 2/ | |
|---|---|---|---|---|---|---|
| | Electricity | Fuel Oil&LPG | Gasoline | Total | No Exemptions | As proposed |
| 0-10 | 6.56 | 27.72 | 89.33 | 123.62 | 2.47 | 1.92 |
| 10-15 | 8.89 | 28.13 | 129.62 | 166.64 | 1.33 | 1.11 |
| 15-20 | 9.81 | 23.36 | 154.19 | 187.37 | 1.07 | .94 |
| 20-30 | 10.53 | 25.61 | 186.58 | 222.72 | .89 | .79 |
| 30-50 | 14.30 | 32.35 | 241.95 | 288.60 | .72 | .64 |
| 50-100 | 19.06 | 39.53 | 309.45 | 368.04 | .49 | .44 |
| 100 or more | 27.11 | 59.23 | 319.51 | 400.85 | .20 | .18 |
| U.S. Average | 12.23 | 35.10 | 196.49 | 287.77 | | |

Average Per-Family Burden for The Wallop-Bentsen Bill (S. 1997), for 1989, Assuming Oil Prices $4 per barrel less than CEA Projections.

| Family Income ($ thousands) | Increase in Oil Expenditures (in dollars) 1/ | | | | Increase in Expenditures as Percent of Family Income 2 | |
|---|---|---|---|---|---|---|
| | Electricity | Fuel Oil&LPG | Gasoline | Total | No Exemptions | As proposed |
| 0-10 | 9.84 | 41.59 | 134.00 | 185.43 | 3.71 | 2.88 |
| 10-15 | 13.34 | 42.19 | 194.44 | 249.96 | 2.00 | 1.66 |
| 115-20 | 14.72 | 35.04 | 231.29 | 281.05 | 1.61 | 1.41 |
| 20-30 | 15.80 | 38.41 | 279.87 | 334.09 | 1.34 | 1.18 |
| 30-50 | 21.44 | 48.52 | 362.93 | 432.90 | 1.08 | .96 |
| 50-100 | 28.58 | 59.29 | 464.18 | 552.06 | .74 | .66 |
| 100 or more | 40.67 | 81.34 | 479.26 | 601.26 | .30 | .26 |
| U.S. Average | 18.35 | 52.64 | 294.29 | 365.27 | | |

Office of the Secretary of the Treasury
Office of Tax Analysis
March 21, 1986

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1/ Assumes that foreign and domestic producers absorb $1 per barrel of the fee. Does not include increased price of natural gas or non-oil goods.

2/ Does not include possible increase in transfer payments.

Table 2

Per-Family 1983 Household Energy Expenditures by Region (in dollars).

| Region | Natural Gas | Electricity | Fuel Oil, LPG | Gasoline | Total |
|---|---|---|---|---|---|
| Northeast | 400.00 | 577.78 | 388.89 | 972.22 | 2,338.89 |
| Midwest | 431.92 | 525.82 | 103.29 | 1,126.76 | 2,187.79 |
| South | 224.20 | 697.51 | 92.53 | 1,209.96 | 2,224.20 |
| West | 260.61 | 430.30 | 42.42 | 1,181.82 | 1,915.15 |
| Average U.S. | 323.78 | 578.26 | 146.95 | 1,136.20 | 2,185.19 |

Source: Energy Information Administration

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Office of Tax Analysis
March 21, 1986

The CHAIRMAN. Thank you, Mr. Ross.
Mr. Wendt.

## STATEMENT OF E. ALLAN WENDT, DEPUTY ASSISTANT SECRETARY FOR INTERNATIONAL ENERGY AND RESOURCES POLICY, DEPARTMENT OF STATE

Mr. WENDT. Thank you very much Mr. Chairman. I am pleased to be able to testify before the committee this morning on the international oil situation and its implications for our energy security.

I will focus on the foreign policy aspects of these issues.

Let me say a few words, Mr. Chairman, about the current oil market. In less than 4 months, spot prices have slipped $31 a barrel to approximately $13, a decline of over 60 percent. In real terms, after taking into account inflation, oil prices are now at the level of 1973.

The seeds of the current price slide were sown last September with the decision of Saudi Arabia to abandon its role of swing producer. Then in December of last year, OPEC announced its intention to regain what it described as a fair share of the world oil market, and thereafter, OPEC production increased from 14.5 million to nearly 18 million barrels a day, and as we all know, prices since then have plummeted.

In the face of these developments, Mr. Chairman, the oil ministers of the OPEC countries, and five nonmember countries, met all of last week in Geneva and, as we know now, they failed to reach agreement on a new comprehensive strategy to restrict production and boost prices.

On the essential questions of production quotas, no agreement proved possible. They have announced their intention to meet again, site-unspecified, on April 15.

So, the current situation in the world oil market is characterized by significant supply overhang, approaching seasonal spring decline in demand, and increasingly competitive markets. The benefits of the oil price decline will accrue to oil-importing countries, particularly those in the OECD community of nations. The noninflationary economic stimulus arising from lower oil prices will promote global economic growth, increased trade, and provide relief for many countries with balance-of-payment problems.

The net oil-exporting countries in the OECD have diversified their economies, such that they should be able to adjust to lower oil prices. In fact, for some OECD net oil exporters, like Canada and the United Kingdom, the benefits of the price decline may outweigh its negative effects.

However, if prices endure at current low levels, the effect could be to delay the development of new production capacity in Norway, to cause production in the United Kingdom to drop off sooner and more sharply than otherwise would have been the case, and also to jeopardize development of high cost frontier oil discoveries in Canada.

With regard to the non-OECD exporters the cost of the price decline will be borne principally by oil-exporting countries. For some of them, the damage will be offset, at least in part, by the expected general improvement in the world economy. But potentially serious problems for United States interests could arise in key developing countries, such as Mexico, Egypt, and Nigeria.

Nonetheless, Mr. Chairman, we do not think that government action to prop up oil prices would be an efficient or effective way to help these countries.

In the Middle East, in particular, oil-producing countries with large foreign exchange reserves and production flexibility should be able to withstand the economic effects of lower oil prices. But other exporters in the Middle East region will be hurt.

Most developing countries are net importers of oil. They stand to benefit from the decline in oil prices. The savings from cheaper oil imports should free up foreign exchange for additional debt service, new investment, and consumption. We would except new opportunities for increased exports as a result of higher GNP growth in the OECD countries.

Now let me turn briefly, Mr. Chairman, to the question of energy security. The central concern for long-term energy security is whether lower oil prices will help Persian Gulf exporters regain the critical role in the oil market that they held for nearly a decade. The gulf region has 57 percent of global oil reserves and very low production costs.

The fundamental objective of U.S. energy policy is to assure an adequate supply of energy at reasonable costs, while avoiding undue dependence on any single fuel or supplier. We believe that this goal can best be achieved by minimizing Federal control and interference in energy markets, and by allowing market forces to operate freely.

Along with 20 other industrial democracies, we are members of the International Energy Agency, which provides an institutional framework for international cooperation in improving energy security.

Our first line of defense in an oil supply disruption is the strategic petroleum reserve, which now holds enough oil to cover, depending on what figures you use for our imports, approximately 110 days of current U.S. imports.

We will continue to urge other member countries of the International Energy Agency to carry more of the burden of holding stocks, and in the event of a supply disruption, we will ask them to join with us in an early coordinated stock draw.

On the question of an oil-import fee, Mr. Chairman, as you know, there have been calls for such fees on crude oil and refined petroleum products as a means of enhancing our energy security and facilitating tax reform. The President has indicated his clear opposition to such an import fee. The Department of State quite strongly opposes import fees for several reasons.

First, it would lower prices outside the United States further by reducing U.S. demand for oil imports. The fees would also discourage non-OPEC production and accelerate dependence on imports from the Persian Gulf region.

Further, Mr. Chairman, we think the fees would reduce U.S. industrial competitiveness by raising domestic energy prices. They would encourage other countries to adopt protectionist measures.

We think an oil-import fee would harm relations with oil-exporting countries, some of whom are key friends and allies of the United States.

Now, we recognize the impact that lower oil prices are having on our domestic energy industry. I can assure you, Mr. Chairman, that we are sensitive to these problems and we are continuing to watch them closely. At the same time, I think we need to consider the total impact of any remedial measures and we do not believe an oil-import fee would in fact enhance our energy security, as some of its proponents suggest.

In conclusion, Mr. Chairman, I would simply like to state that there is a more effective approach for ensuring energy security and that would consist of intensifying efforts to remove barriers to U.S. energy production. We have heard Secretary Herrington this morning talk about these issues—natural gas deregulation is an example; promoting increased competition in inland coal transportation is another, as well as streamlining our nuclear regulatory regime, accelerating offshore leasing, and removing prohibitions on oil exports.

We should also be ready, Mr. Chairman, to consider strengthened Government support for basic research and development in all sources of energy, should that prove desirable. Thank you, Mr. Chairman.

[The prepared statement of Mr. Wendt follows:]

# STATEMENT OF E. ALLAN WENDT

DEPUTY ASSISTANT SECRETARY OF STATE
FOR
INTERNATIONAL ENERGY AND RESOURCES POLICY

BEFORE THE

SENATE COMMITTEE ON ENERGY AND NATURAL RESOURCES

MARCH 25, 1986

## I. INTRODUCTION

MR. CHAIRMAN, I AM PLEASED TO HAVE THIS OPPORTUNITY TO TESTIFY BEFORE THE COMMITTEE ON THE CURRENT INTERNATIONAL OIL MARKET SITUATION AND THE IMPLICATIONS FOR OUR ENERGY SECURITY. I SHALL FOCUS ON THE FOREIGN POLICY IMPACTS, AND LEAVE DIFFERENT ASPECTS FOR CONSIDERATION BY OTHERS WITNESSES.

## II. CURRENT OIL MARKET

IN LESS THAN FOUR MONTHS, SPOT CRUDE PRICES FOR BENCHMARK WEST TEXAS INTERMEDIATE (WTI) SLIPPED FROM $31 PER BARREL TO $13 -- A DECLINE OF OVER 60 PERCENT -- TO LEVELS LAST SEEN IN 1979. IN REAL TERMS, SPOT OIL PRICES ARE NOW AT THE LEVEL OF THE LAST HALF OF 1973. THE NORTH SEA'S BRENT PRICE HAS EXPERIENCED A SIMILAR FALL. ALTHOUGH ONLY A SMALL PORTION OF WORLD OIL MOVES ON THE SPOT MARKET, THIS MARKET IS A PUBLIC INDICATOR OF PRICE MOVEMENTS AND EXERTS A STRONG INFLUENCE ON THE DIRECTION OF CONTRACT PRICES.

MOVEMENT TOWARD THE CURRENT PRICE SLIDE ACTUALLY BEGAN LAST SEPTEMBER WITH THE SAUDI DECISION TO ABANDON THE ROLE OF SWING PRODUCER FOR OPEC. CONCERNED BY THE FAILURE OF OTHER OPEC MEMBERS TO RESPECT PRODUCTION QUOTAS AND OFFICIAL PRICES, THE SAUDIS BEGAN TO SELL CRUDE ON A "NETBACK" BASIS, IN WHICH THE PRICE OF A BARREL OF CRUDE IS DETERMINED BY THE PRICE OF THE FINAL PRODUCTS DERIVED FROM IT. IN DECEMBER 1985, OPEC ANNOUNCED its intention to regain a "fair share" of the world market, a sizable part of which had been lost to non-OPEC producers since 1979.

A key factor in world oil price movements is the level of OPEC production. With the announcement of its intention to regain market share, OPEC increased production to just over 18 million barrels per day (B/D) -- most of this increase coming from Saudi Arabia. January OPEC production dropped to just over 17 million B/D owing in part to difficulties in selling oil in a glutted market, but also because of damage to Iranian oil facilities from Iraqi air strikes and Nigerian government problems in negotiating with oil companies. February production rebounded to an estimated 18 million B/D.

In the second quarter of this year, the usual seasonal decline in demand -- expected to be 2 to 3 million B/D -- is certain to put additional downward pressures on oil prices in a market already characterized by supply overhang and increasing competition. In the short term, moreover, companies may choose not to shut in production since bringing it back up can prove expensive and occasionally impossible. In the absence of effective action by producers to restrain production, the most likely outlook is for continued price weakness and uncertainty.

## III A. THE IMPACT OF FALLING OIL PRICES

The OECD community of nations stands to benefit from lower oil prices. According to International Energy Agency (IEA) estimates, oil prices averaging $20 per barrel would cut OECD inflation and interest rates by about one percent a year over a two to three year period. About $30 billion in net income would be transferred to the OECD area, raising OECD GDP by 0.4 percent. As an added benefit, there will be downward pressure on interest rates due to lower inflation, increased savings caused by income transfers, and easing of monetary policies facilitated by improved external account positions. The diversified economies of OECD net oil exporting nations should enable them to adjust to lower oil prices. In fact, for some OECD net oil exporters the price decline's benefits may outweigh its negative effects.

### Consumer Countries

As the most oil import-dependent IEA nation, Japan will be a big winner from an oil price decline. According to Japanese government estimates, if oil prices average $15 in 1986, Japanese GDP would rise by 0.9 percent above previously forecast levels; inflation would decline by 0.9 percent; and the current account surplus would increase by $20.8 billion. Much the same story would be repeated in other IEA net oil importing countries. Italian economists estimate that $18 to $20 per barrel oil would wipe out their national trade deficit and put the current account into surplus for the second time since 1979.

Several IEA net oil importing nations have taken the opportunity presented by falling oil prices to raise energy taxes and thereby correct fiscal imbalances. According to our information, the new revenue measures are all aimed at internal consumption rather than imports and are therefore not protectionist in nature. The IEA has reported petroleum excise tax increases in Denmark, Australia and Italy, while according to the trade press there have been similar tax developments in Ireland, Greece, Spain and Portugal. The IEA also reports a Swiss tariff increase on heating oil and natural gas that will have the effect of an internal excise tax as it will fall in a nondiscriminatory manner on indigenous natural gas production and heating oil refined in Switzerland.

Both the French and German governments have said they will not impose new taxes or import surcharges on oil in response to the drop in oil prices. The Japanese have not raised taxes, but it is still unclear whether the full benefit of yen appreciation and the oil price decline will be passed on to consumers.

Exporting Countries

Norway may see its 1986 economic growth halved from its previously forecast three percent level if oil prices average $15 per barrel for the year, while the United Kingdom and Canada should on balance benefit from lower oil prices. Though its

DIVERSIFIED INDUSTRIAL ECONOMY SHOULD HELP NORWAY WEATHER THE IMPACT OF LOWER OIL PRICES. SEVERAL YEARS OF $15 PER BARREL OIL COULD DELAY DEVELOPMENT OF NEW NORWEGIAN PRODUCTION CAPACITY.

THOUGH EACH DOLLAR DECLINE IN THE OIL PRICE COSTS THE U.K. $700 MILLION IN EXPORT REVENUES, U.K. ECONOMISTS SEE SUCH NEGATIVE EFFECTS OUTWEIGHED BY THE BENEFICIAL IMPACT OF LOWER OIL PRICES ON GNP GROWTH, INFLATION, INDUSTRIAL PRODUCTION, UNEMPLOYMENT, AND THE EXPORT COMPETITIVENESS OF U.K. MANUFACTURES. FALLING OIL PRICES, HOWEVER, HAVE ALREADY CAUSED THE U.K. GOVERNMENT TO RECONSIDER ITS PLANS TO CUT TAXES. IN ADDITION, A LONG-TERM FALL OFF IN EXPLORATION AND DEVELOPMENT IN NEW NORTH SEA FIELDS COULD CAUSE U.K. PRODUCTION TO DROP OFF SOONER AND MORE SHARPLY THAN WOULD OTHERWISE BE THE CASE.

CANADA ON BALANCE WILL BENEFIT FROM FALLING OIL PRICES, THOUGH THE WESTERN ENERGY PRODUCING PROVINCES WILL BE HURT. FALLING OIL PRICES COULD JEOPARDIZE THE DEVELOPMENT OF SUCH EXPENSIVE FRONTIER OIL DISCOVERIES AS HIBERNIA, SABLE ISLAND AND THE BEAUFORT SEA, AS WELL AS RENDER CURRENT OIL SANDS AND HEAVY OIL PROJECTS UNECONOMIC.

## B. NON-OECD EXPORTERS

### MIDDLE EAST

SINCE ALMOST EVERY ECONOMY IN THE MIDDLE EAST AND NORTH AFRICA DEPENDS EITHER DIRECTLY OR INDIRECTLY ON REVENUES FROM OIL EXPORTS, FALLING OIL PRICES WILL CREATE DIFFICULTIES THROUGHOUT THE REGION.

IN THE OIL EXPORTING COUNTRIES, REVENUES WILL DECLINE DIRECTLY AS OIL PRICES FALL, ESPECIALLY IN THE PERSIAN GULF REGION, BUT ALSO IN THE OTHER MIDDLE EAST OIL PRODUCING COUNTRIES (SUCH AS EGYPT, SYRIA, AND TUNISIA). IF, AS APPEARS LIKELY, THE PRESENT DOWNTURN IN THE OIL EXPORTING ECONOMIES CONTINUES AND PERHAPS DEEPENS, THE RESULT WILL MEAN DIMINISHED EXPORT AND OTHER OPPORTUNITIES FOR U.S. BUSINESS IN WHAT HAS BEEN AN EXTREMELY IMPORTANT MARKET. FALLING OIL REVENUES WILL ALSO MEAN LOWER GOVERNMENT REVENUES, WHICH IN TURN WILL MEAN THESE GOVERNMENTS WILL UNDERTAKE FEWER NEW DEVELOPMENT AND INFRASTRUCTURE PROJECTS AND WILL ABANDON OR STRETCH OUT PROJECTS ALREADY UNDERWAY. MOREOVER, SOME OF THE WEALTHIER OIL-EXPORTING COUNTRIES, WHICH HAVE BEEN IMPORTANT DONORS OF INTERNATIONAL AID, ARE CUTTING BACK ON SUCH ASSISTANCE.

FALLING REMITTANCE INCOMES FROM FOREIGN WORKERS IN GULF COUNTRIES WILL CREATE ADDITIONAL PROBLEMS FOR A NUMBER OF COUNTRIES OUTSIDE THE GULF. EGYPT WILL BE PARTICULARLY HARD HIT.

AS SHARP DROPS IN OIL INCOME AND OVERSEAS REMITTANCES ARE BEING ACCOMPANIED BY A DECLINE IN SUEZ CANAL AND TOURIST RECEIPTS.

ON BALANCE, OIL PRODUCING COUNTRIES IN THE MIDDLE EAST WITH LARGE FOREIGN EXCHANGE RESERVES AND PRODUCTION FLEXIBILITY SHOULD BE ABLE TO WITHSTAND MOST OF THE STRINGENCIES IMPOSED BY THE DROP IN OIL REVENUES. HOWEVER, MANY OF THE OTHER COUNTRIES IN THE REGION -- BOTH OIL EXPORTERS AND IMPORTERS -- WILL BE HURT. THESE GOVERNMENTS ARE ALREADY CUTTING EXPENDITURES AND SUBSIDIES, A COURSE THAT WILL ONLY SERVE TO DEEPEN THE RECESSION. POPULAR EXPECTATIONS COULD CLASH WITH ECONOMIC REALITIES AND LEAD TO HEIGHTENED TENSIONS AND POLITICAL STRAINS.

## HIGH DEBT OIL EXPORTERS

MEXICO. OIL ACCOUNTS FOR 70 PERCENT OF MEXICAN MERCHANDISE EXPORT EARNINGS AND 45 PERCENT OF FEDERAL GOVERNMENT REVENUES. MEXICO WILL SUFFER ON TWO COUNTS -- FALLING PRICES AND REDUCED EXPORT LEVELS, WHICH HAVE DROPPED FROM THE TRADITIONAL 1.5 MILLION B/D OIL EXPORTS TO 1.1 MILLION B/D OWING TO WEAK DEMAND. IF 1986 PRICES AVERAGE $15 PER BARREL, MEXICAN EXPORT EARNINGS FROM OIL THIS YEAR WILL BE $5 BILLION BELOW THE 1985 LEVEL. IN RESPONSE TO THE OIL PRICE DECLINE, THE MEXICAN GOVERNMENT IN FEBRUARY ANNOUNCED CUTBACKS IN GOVERNMENT EXPENDITURES AND MOVED TOWARDS A MARKET-ORIENTED EXCHANGE RATE. THE GOVERNMENT HAS announced, nonetheless, that it still needs $4 billion in new money from commercial banks and international financial institutions.

Venezuela. In Venezuela, oil accounts for 90 percent of export earnings. While Venezuela's foreign exchange reserves of $13.7 billion should help absorb the impact of lower oil prices, the government will still have to reduce expenditures and cut imports. The sharp fall in oil export earnings will make it difficult to service Venezuela's debt, even though much of it was recently rescheduled.

Ecuador. With $7.5 billion in foreign debt, Ecuador depends on oil for almost two-thirds of its export earnings. The oil price decline has caused the Ecuadorean Government to adopt austerity measures, and further steps are likely to prove necessary.

Indonesia. In 1985, petroleum provided 65 percent of Indonesia's total export earnings dollars and 60 percent of government revenues. Indonesia's non-oil commodities (e.g. natural rubber, tin and tropical timber) -- which have traditionally accounted for 30 percent of the country's total foreign exchange earnings -- will provide some relief, but world markets for those commodities are also depressed. The country's

DEBT SERVICE RATIO -- ALREADY AT 25 PERCENT -- WILL RISE THIS YEAR, BUT TRADITIONALLY SOUND MANAGEMENT SHOULD CONTINUE TO ALLOW ACCESS TO INTERNATIONAL CREDIT MARKETS.

NIGERIA. NIGERIA WILL FACE GROWING PRESSURE IF PRICES STAY BELOW $20 A BARREL. IN 1985, NIGERIA DEPENDED ON OIL FOR OVER 95 PERCENT OF ITS TOTAL EXPORT EARNINGS AND 70 PERCENT OF GOVERNMENT REVENUES. FALLING OIL PRICES HAVE DRIVEN EXTERNAL INCOME DOWN FROM A HIGH OF $24 BILLION IN 1980 TO $11.3 BILLION IN 1985. LOWER OIL PRICES WILL FURTHER REDUCE FOREIGN EXCHANGE EARNINGS. MEANWHILE, NIGERIA'S 1986 SERVICE ON ITS APPROXIMATELY $19 BILLION EXTERNAL DEBT IS ESTIMATED AT MORE THAN $5 BILLION, AND ANNUAL IMPORTS PROBABLY CANNOT BE REDUCED MUCH BELOW $7 BILLION.

USSR. THE SOVIET UNION RECEIVES 60 PERCENT OF ITS HARD CURRENCY EARNINGS FROM OIL AND GAS EXPORTS TO WESTERN COUNTRIES. THE OIL PRICE DECLINE COULD EVENTUALLY CAUSE THE SOVIETS TO CURTAIL IMPORTS OF HARD CURRENCY ITEMS -- MAINLY FOOD AND CAPITAL GOODS -- AND MAKE IT MORE DIFFICULT FOR MOSCOW TO CARRY OUT ITS PROGRAM TO MODERNIZE INDUSTRIAL PLANTS AND INCREASE PRODUCTION. THE SOVIETS ARE LIKELY, NEVERTHELESS, TO CONTINUE ACHIEVING MODEST RATES OF ECONOMIC GROWTH.

## NON-OECD IMPORTERS

MOST DEVELOPING COUNTRIES ARE NET IMPORTERS OF OIL AND AS SUCH STAND TO BENEFIT FROM THE DECLINE IN OIL PRICES. AS A group. The oil importing developing countries are expected to import about 3.2 million B/D in 1986. Those imports, which cost them some $33 billion last year, would cost only $19 billion at average oil prices of $15 per barrel. These savings will free up foreign exchange for additional debt service, new investment, or consumption. The developing countries will also find opportunities for increased exports as a result of higher GNP growth in the OECD countries.

Brazil, for example, is dependent on imported oil for 40 percent of its total petroleum consumption. Each dollar decline in oil is a savings of about $125 million. Brazil will also benefit indirectly from lower interest rates on its debt repayments and from increased exports to OECD countries. The country's extensive alcohol production program, however, will require serious adjustments and layoffs of alcohol industry workers will exacerbate unemployment.

## IV. ENERGY SECURITY

The central concern now for our long-term energy security is whether Persian Gulf oil exporters will regain the critical rule in the oil market that they played for nearly a decade. The Gulf, including Iran and Iraq, has 57 percent of the world's oil reserves. It also has an advantage over the rest of the world in terms of low oil discovery and direct production costs. Reserves

OUTSIDE THE PERSIAN GULF ARE RELATIVELY COSTLY TO FIND AND EXPLOIT, AND THEY ARE LIKELY TO GO UNDEVELOPED OR BE SHUT IN WHEN PRICES FALL.

A FUNDAMENTAL OBJECTIVE OF U.S. ENERGY POLICY IS TO ASSURE AN ADEQUATE SUPPLY OF ENERGY AT REASONABLE COST WHILE AVOIDING UNDUE DEPENDENCE ON ANY SINGLE FUEL OR SUPPLIER. WE BELIEVE THIS GOAL IS BEST ACHIEVED BY MINIMIZING FEDERAL CONTROL AND INTERFERENCE IN ENERGY MARKETS AND BY ALLOWING MARKET FORCES TO PROMOTE CONSERVATION AND FUEL DIVERSIFICATION. WE ARE ALSO MEMBERS, ALONG WITH 20 OTHER INDUSTRIAL DEMOCRACIES, OF THE INTERNATIONAL ENERGY AGENCY (IEA), WHICH PROVIDES AN INSTITUTIONAL FRAMEWORK FOR COOPERATION AMONG ITS MEMBERS IN IMPROVING ENERGY SECURITY.

OUR FIRST LINE OF DEFENSE AGAINST AN OIL SUPPLY DISRUPTION IS THE STRATEGIC PETROLEUM RESERVE (SPR). IF OUR VULNERABILITY TO AN OIL CUTOFF WERE TO GROW SIGNIFICANTLY, WE WOULD NEED TO REEVALUATE THE ADEQUACY OF THE SPR, WHICH NOW HOLDS OVER 100 DAYS OF CURRENT U.S. IMPORTS (A TOTAL OF ALMOST 500 MILLION BARRELS). IN THE INTERIM WE CAN INCREASE U.S. ENERGY SECURITY BY INTENSIFYING OUR EFFORTS TO REMOVE BARRIERS TO U.S. ENERGY PRODUCTION THROUGH NATURAL GAS DEREGULATION, INCREASED COMPETITION IN INLAND COAL TRANSPORTATION, STREAMLINING OF OUR NUCLEAR REGULATORY REGIME, ACCELERATION OF OFFSHORE LEASING AND REMOVAL OF OIL EXPORT PROHIBITIONS. THE ADMINISTRATION HAS

SOUGHT CONGRESSIONAL HELP ON THESE MATTERS IN THE PAST AND WILL BE RENEWING ITS EFFORTS IN A NUMBER OF THESE AREAS. WE SHOULD ALSO BE READY TO CONSIDER STRENGTHENED GOVERNMENT SUPPORT FOR BASIC RESEARCH AND DEVELOPMENT IN ALL SOURCES OF ENERGY -- RENEWABLES, FOSSIL, NUCLEAR, FUSION, CONSERVATION AND ALTERNATIVE FUELS.

OUR ENERGY SECURITY IS LINKED WITH THAT OF OUR IEA PARTNERS THROUGH THE GLOBAL NATURE OF THE OIL MARKET. PRICE SHOCKS AND ECONOMIC DISRUPTIONS IN ONE COUNTRY OR AREA ARE QUICKLY TRANSMITTED TO OTHERS. WE THEREFORE TRY TO MONITOR THE MARKET CLOSELY TO DETECT EARLY SIGNS OF INCREASED IEA DEPENDENCE ON INSECURE ENERGY-SUPPLIERS. SUSTAINED LOW OIL PRICES ARE LIKELY TO SLOW CONSERVATION GAINS AND REDUCE NON-OPEC ENERGY RESOURCE DEVELOPMENT AND PRODUCTION. LOW PRICES THUS MAKE IT LIKELY THAT IEA VULNERABILITY WILL INCREASE SOONER RATHER THAN LATER, BUT THEY ALSO DECREASE THE COSTS OF BUILDING STOCKS. WE WOULD LIKE THE OTHER IEA MEMBER STATES TO STRENGTHEN OUR COLLECTIVE ENERGY SECURITY BY CARRYING MORE OF THE BURDEN OF STOCKHOLDING, AND BY JOINING WITH US IN EARLY, COORDINATED STOCKDRAW IN THE EVENT OF A SUPPLY DISRUPTION.

## V. THE MATTER OF AN OIL IMPORT FEE

AS YOU KNOW, THERE HAVE BEEN CALLS RECENTLY FOR IMPOSITION OF IMPORT FEES ON CRUDE OIL AND REFINED PETROLEUM PRODUCTS AS A MEANS OF ENHANCING OUR ENERGY SECURITY AND FACILITATING TAX reform. The President, however, has indicated his clear opposition to such import fees. The Department of State believes an oil import fee would have a number of negative consequences for our foreign policy, foreign trade, and industrial competitiveness.

-- World Oil Market Prices. While raising prices in the U.S., import fees would at the same time tend to depress further world market prices for crude oil and products. The domestic price rise caused by an import fee would reduce U.S. imports and consumption, thereby bringing about a drop in prices outside the U.S. as the world market responds to this reduction. Lower international prices would depress revenues of producers, thus creating further problems for a number of countries already in serious financial difficulty. An import tax might thus strengthen the hand of unfriendly elements in key developing countries and could lead to default on debt obligations. We could be accused of using an oil import tax to deal with our own problems at the expense of others.

-- Competitiveness of U.S. Industry. An import fee would damage the international competitiveness of energy-intensive U.S. industries, notably the petrochemical industry and American agriculture. For the U.S. petrochemical industry, increasing the cost of petroleum feedstocks would undermine its competitiveness

AT A TIME WHEN IT IS ALREADY FACED WITH INCREASED IMPORTS INTO THE U.S. AND DEEP PENETRATION OF ITS TRADITIONAL EXPORT MARKETS BY NEW LOW-COST PETROCHEMICAL PLANTS IN OIL-EXPORTING COUNTRIES. AMERICAN AGRICULTURE -- A SIGNIFICANT CONSUMER OF PETROLEUM THROUGH TRACTOR FUEL, FERTILIZERS, CROP DRYING AND TRANSPORTATION TO FOREIGN AND DOMESTIC MARKETS -- WOULD ALSO BE HURT BY AN INCREASE IN ITS COSTS AND RENDERED LESS COMPETITIVE IN IMPORTANT EXPORT MARKETS.

-- GATT AND OTHER TRADE OBLIGATIONS. AN IMPORT FEE WOULD POSE DIFFICULTIES UNDER THE GENERAL AGREEMENT ON TRADE AND TARIFFS (GATT). U.S. TARIFFS ON MANY PETROLEUM PRODUCTS ARE BOUND AT CURRENT LEVELS. INCREASING THE DUTIES ON THOSE PRODUCTS WOULD BE INCONSISTENT WITH OUR OBLIGATIONS UNDER THE GATT, UNLESS IT WERE JUSTIFIED UNDER THE GATT EXCEPTION FOR ESSENTIAL SECURITY INTERESTS. EVEN IF A JUDGMENT WERE MADE THAT IMPOSITION OF AN IMPORT FEE WAS JUSTIFIABLE AS SUCH A MEASURE, ADVERSELY AFFECTED GATT MEMBERS THAT SUFFER DEMONSTRABLE INJURY WOULD BE ENTITLED TO COMPENSATION OR RETALIATION AGAINST U.S. EXPORTS.

ALTHOUGH THE U.S. TARIFF ON CRUDE OIL IS NOT BOUND UNDER THE GATT, THE U.S. HAS GRANTED TARIFF RATE CONCESSIONS ON CRUDE, CRUDE SHALE OIL, DISTILLATE AND RESIDUAL FUEL OILS IN A BILATERAL AGREEMENT WITH VENEZUELA. EXEMPTING ONLY VENEZUELA FROM HIGHER TARIFFS, HOWEVER, WOULD VIOLATE OUR OBLIGATION TO AFFORD

MOST-FAVORED NATION (MFN) TREATMENT TO GATT MEMBERS AMONG OUR SUPPLIERS. AT THE SAME TIME, WE ALSO HAVE BILATERAL TREATIES GRANTING MFN TREATMENT TO OTHER SUPPLIERS WHO ARE NOT PARTIES TO THE GATT. IN SHORT, THERE MAY BE NO WAY COMPATIBLE WITH EXISTING TRADE COMMITMENTS TO EXEMPT ONLY A FEW FOREIGN SUPPLIERS FROM AN IMPORT FEE.

-- BILATERAL FOREIGN RELATIONS. AN IMPORT FEE WOULD CREATE PROBLEMS WITH OUR NEIGHBORS AND WITH SOME OF OUR CLOSEST ALLIES. THE CANADIAN AND MEXICAN GOVERNMENTS HAVE ALREADY EXPRESSED STRONG CONCERN ABOUT AN OIL IMPORT FEE. EXEMPTING THESE NEIGHBORS, HOWEVER, WOULD DISCRIMINATE AGAINST OUR THIRD AND FOURTH LARGEST SUPPLIERS, VENEZUELA AND THE UNITED KINGDOM. VENEZUELAN OFFICIALS HAVE ALSO EXPRESSED CONCERN ABOUT POSSIBLE FEES, AND IT IS IMPORTANT TO REMEMBER THAT VENEZUELA -- ALTHOUGH AN OPEC MEMBER -- DID NOT PARTICIPATE IN THE 1973 OIL EMBARGO. THE UK, WHICH HAS STEADFASTLY REFUSED TO COOPERATE WITH OPEC ON FIXING PRICES ARTIFICIALLY, ALSO OPPOSES THE FEE. LAST YEAR PRIME MINISTER THATCHER PERSONALLY EXPRESSED CONCERN TO PRESIDENT REAGAN ON THE ISSUE; AND THE PRIME MINISTER OF NORWAY, A CLOSE NATO ALLY THAT HAS ALSO REJECTED COOPERATION WITH OPEC, RECENTLY REGISTERED SIMILAR CONCERN. MOREOVER, AT LAST YEAR'S SUMMIT MEETING IN QUEBEC, PRESIDENT REAGAN AND CANADIAN PRIME MINISTER MULRONEY AGREED TO REDUCE BARRIERS TO ENERGY TRADE BETWEEN THE U.S. AND CANADA. AN IMPORT FEE WOULD BE A RETREAT FROM THAT UNDERTAKING.

-- IEA Commitments. The main goals of the 21-country IEA are to pursue long-term policies designed to reduce oil import dependence and to cooperate in the event of major oil supply disruptions. At an IEA Ministerial meeting in July 1985, the U.S. successfully pushed for communique language calling for open market-based trade in oil products. Imposition of an import fee would be a retreat from that commitment and might well trigger similar actions by our IEA partners seeking to shelter their own domestic oil and refining industries, thus magnifying downward pressure on oil prices as well as creating additional trade problems.

-- Market Pricing Distortions. Crude oil is not a homogeneous commodity, and the market place accurately takes the characteristics of different crudes into account through price differentials. A flat import fee, however, would distort that process. It would discriminate against "heavy" (below average) crude oils, which are sold more cheaply because they tend to be more expensive to refine and have lower yields of high value products. Market forces would respond to the import fee by driving up the relative prices of heavy crudes, such as those produced in Mexico, Venezuela, and California. As a result, the trend toward greater U.S. consumption of heavy crudes -- a trend that has contributed to diversification of our sources of crude imports and reduced our dependence on Middle East suppliers -- could receive a significant setback.

## CONCLUSION

THE BENEFITS OF THE OIL PRICE DECLINE WILL ACCRUE TO OIL-IMPORTING COUNTRIES, PARTICULARLY THOSE IN THE OECD COMMUNITY. THE NON-INFLATIONARY ECONOMIC STIMULUS ARISING FROM LOWER OIL PRICES WILL PROMOTE GLOBAL ECONOMIC GROWTH, INCREASE TRADE, AND PROVIDE RELIEF FOR MANY COUNTRIES WITH FINANCIAL AND BALANCE OF PAYMENTS PROBLEMS.

THE COSTS OF THE PRICE DECLINE WILL BE BORNE PRINCIPALLY BY OIL-EXPORTING COUNTRIES. ALTHOUGH FOR SOME OF THEM THE DAMAGE WILL BE OFFSET IN PART BY GENERAL IMPROVEMENT IN THE WORLD ECONOMY, POTENTIALLY SERIOUS PROBLEMS FOR U.S. INTERESTS COULD ARISE AMONG SOME LDC DEBTOR COUNTRIES -- SUCH AS MEXICO, EGYPT, AND NIGERIA. GOVERNMENT ACTION TO PROP UP OIL PRICES, HOWEVER, WOULD BE AN INEFFICIENT WAY TO HELP THESE COUNTRIES.

IN ADDITION TO THE ECONOMIC ASPECTS OF DECLINING OIL PRICES, THERE ARE ALSO IMPORTANT ENERGY SECURITY IMPLICATIONS. THE CENTRAL QUESTION HERE IS WHETHER LOWER OIL PRICES NOW MAY HASTEN THE DAY WHEN PERSIAN GULF EXPORTERS -- WITH EXTENSIVE RESERVES AND LOW PRODUCTION COSTS -- REGAIN THE DOMINANCE THEY EXERCISED FOR NEARLY A DECADE. WE MUST MONITOR CAREFULLY OUR VULNERABILITY TO A SUPPLY DISRUPTION AND PRESS OUR IEA PARTNERS TO BEAR MORE OF THE BURDEN OF HOLDING STOCKS. EARLY, COORDINATED USE OF STOCKS IS OUR BEST DEFENSE IN AN ENERGY EMERGENCY.

IF WE CONSIDER ITS TOTAL IMPACT, WE ARE CONVINCED AN OIL IMPORT FEE WOULD NOT ENHANCE OUR ENERGY SECURITY. A MORE CONSTRUCTIVE APPROACH TO THE IMPACT OF LOW PRICES ON FUTURE SUPPLY WOULD BE TO RENEW OUR EFFORTS TO SIMPLIFY OR REMOVE REGULATORY AND OTHER IMPEDIMENTS TO DOMESTIC ENERGY PRODUCTION. U.S. OIL PRODUCTION CANNOT BE EXPECTED TO INCREASE, BUT THE U.S. HAS VAST RESOURCES OF COAL, NATURAL GAS AND NUCLEAR ENERGY THAT CAN HELP US LIMIT DEPENDENCE ON OIL IMPORTS FROM LESS SECURE SOURCES. PROGRESS IN PROMOTING THESE ALTERNATIVE ENERGY SOURCES WILL REQUIRE A CONCERTED EFFORT TO FREE UP ENERGY MARKETS, AN EFFORT THAT DEPENDS ON CONTINUING INTEREST AND ACTION ON THE PART OF CONGRESS.

The Chairman. Thank you.
Mr. Wilson.

## STATEMENT OF S. BRUCE WILSON, ASSISTANT U.S. TRADE REPRESENTATIVE FOR INDUSTRY AND SERVICES

Mr. Wilson. Thank you, Mr. Chairman. I am pleased to appear today before the committee to present the views of the Office of the U.S. Trade Representative with respect to the trade policy implications of any oil-import fee that might be imposed.

From a trade policy perspective, Mr. Chairman, we have two general sets of concerns about an oil-import fee. One relates to the inconsistency of such a fee with our international trading obligations, and the other to the adverse impact such a fee would have on the international competitiveness of our energy-intensive industries.

As for our international trading obligations, under the general agreement on tariffs and trade, the GATT, and under certain bilateral trade agreements that we have, I think it is clear that an oil-import fee on both crude oil and on refined oil products would place us in violation of certain of those obligations.

For example, under the GATT, all of our tariffs on refined petroleum products are legally bound. That is, we may not raise any of those tariffs without either compensating our affected trading partners by lowering our tariffs on other products on an equivalent amount of trade, or accepting increased tariffs abroad for U.S. exports on an equivalent amount of trade.

We have done some estimates, Mr. Chairman, and we have found that imposing an import fee on refined petroleum products would necessitate our having to pay our GATT trading partners compensation for somewhere around $10 billion worth of trade.

In our view, that is a staggering sum in the trade policy area, especially considering the fact that we have very few industries in this country at this time that I know of who would like to see their own tariffs reduced to compensate for increasing, in effect, their energy costs, compared to their competitors overseas.

Just to give you an idea in trade policy terms of what this $10 billion figure represents, you may be aware, Mr. Chairman, that currently we are engaged in a rather acrimonious dispute with the European communities over the enlargement of the communities to include Portugal and Spain and the impact that that enlargement is having on United States exports to the community.

Right now, that dispute revolves around $1 billion trade. So, I can imagine what would happen if we got into a dispute in the GATT over increasing tariffs on refined oil products, worth about $10 billion in trade.

I think as a result of this, the more likely result is that we would probably not find ways of compensating our trading partners for such an oil-import fee on refined products, and our trading partners would probably end up retaliating against us and our exporting industries would face higher tariffs on some 10 billion dollars' worth of their trade.

There are other international legal complications arising from our adoption of an oil-import fee that I have covered in my written testimony. Suffice it to say that adoption of such a fee will disrupt our trading relationships with many of our most important trading partners and allies, and in the span of products that I think goes quite beyond the petroleum field.

As for the adverse impact on the international competitiveness of our energy-intensive industries, we in the trade representative's office are extremely concerned about such an import fee, not only in such industries as petrochemicals, where we estimate that up to some 70 percent of the cost of production is the cost of the hydrocarbon feedstocks, but also in other industries, such as primary metals—for example, steel, where we all know that we have tremendous problems these days, our construction materials industries, our transportation industries and our agricultural industries, which rely on such energy-related inputs as fuel, fertilizers, and pesticides.

We believe that increasing energy costs for these industries, in comparison to the energy costs paid by the foreign competitors, will only make it harder for them to compete both in the United States and in world markets.

This, in turn, can only lead to a negative effect on our overall trade balance, which, as you know, Mr. Chairman, is already heavily in deficit.

In sum, Mr. Chairman, for the trade policy reasons that I have briefly summarized here, the Office of the U.S. Trade Representative fully supports the President in his opposition to an oil-import fee.

Thank you.

[The prepared statement of Mr. Wilson follows:]

# STATEMENT OF

S. BRUCE WILSON

ASSISTANT U.S. TRADE REPRESENTATIVE FOR

INDUSTRY AND SERVICES

BEFORE THE SENATE COMMITTEE ON ENERGY AND NATURAL RESOURCES

MARCH 25, 1986

## STATEMENT OF S. BRUCE WILSON
## ASSISTANT U.S. TRADE REPRESENTATIVE FOR INDUSTRY AND SERVICES

Good Morning, Mr. Chairman, Members of the Subcommittee. I am Bruce Wilson, Assistant U.S. Trade Representative for Industry and Services and I am pleased to appear before you today to present the comments of the Office of the U.S. Trade Representative on the trade policy implications of an oil import fee. Before I address these points, however, I should note that the President has made his opposition to an oil import fee clear, citing its negative effects on the economy.

There are two principal aspects of a fee from a trade point of view: the inconsistency of an oil import fee with our international trade obligations and the adverse impact on the competitiveness of our energy-intensive industries.

### International Trade Obligations

The United States has certain obligations regarding the tariff treatment of petroleum under various international agreements. Specifically, under the General Agreement of Tariffs and Trade (GATT) we have "bound" a majority of our tariff levels; that is, we have pledged not to increase these tariffs above the levels prevailing at the time of the binding. This binding applies not only to the tariffs listed in the Tariff Schedules of the United States (TSUS) but to any fee or charge imposed on imports which would have the same effect as a tariff.

Petroleum product tariff levels are bound under the GATT, but crude oil tariffs are not. However, since an import fee only on crude oil would make our petroleum refining industry extremely vulnerable to imports of refined products, it is assumed any oil import fee would be imposed on both crude oil and refined petroleum products. Thus, if the United States were to impose an oil import fee, we would owe compensation to our GATT trading partners for the loss in trade or increased cost to them associated with the product portion of the fee.

It is also possible other GATT members could argue, in accordance with GATT Article XXIII, that their rights under the GATT were being nullified or impaired by a crude oil fee, even though the crude oil tariffs are not explicitly bound. The European Community and various individual countries which are GATT members have already indicated to us that they would consider any oil import fee inconsistent with our GATT obligations.

A further international obligation is contained in a 1972 bilateral trade agreement with Venezuela, in which we pledged not to raise our duties on crude oil from Venezuela. If we honor this commitment to Venezuela, then we are also obligated under Article I of the GATT to extend this same concession to all GATT members or be liable to compensation for imposing an import fee on crude oil.

Similarly, if we exempt certain countries from either a crude oil or a product import fee, then we would owe compensation to all other GATT members (or other countries to whom we have most-favored-nation obligations) for the adverse impact on their exports. In this regard, the four leading countries from which we import oil are Mexico (17 percent of imports in 1985), Canada (16 percent of imports), Venezuela (13 percent of imports), and the United Kingdom (almost 7 percent of imports).[1] All of these countries, which together account for over half of our oil imports, are leading candidates for an exemption or, if not granted such an exemption, would certainly seek compensation as major U.S. trading partners.

With respect to petroleum product imports, 17 of the top 25 suppliers in 1985, accounting for over 92 percent of our product imports, were either Western Hemisphere countries or OECD countries. We should be very careful to avoid disrupting our trade relations with these important neighbors and allies.

Adverse Impact on International Competitiveness

The second major trade implication of an oil import fee is the adverse effect of such a fee on the international competitiveness of our energy-intensive industries. With a trade deficit of $145 billion last year, we simply cannot afford to undercut the position of our major industries selling in international markets, including the U.S. market.

An increase in oil prices resulting from an oil import fee would also be reflected in other energy prices, including natural gas, coal and electricity. Domestic oil prices presumably would rise by the amount of the fee (unless discounting of oil for U.S. sales resulted in some part of the fee being paid by oil exporters). The price of natural gas tends to follow oil prices over time, and so gas prices would also be higher than they would otherwise be by an amount approximately equal to the effect of the fee on oil products which compete with natural gas. Coal prices for electric generation also track oil prices over the longer term.

Among the industries which would be adversely affected by these higher energy prices are petrochemicals, primary metals, construction materials, transportation and agriculture. As much as 70 percent of the cost of production of basic petrochemicals is the cost of hydrocarbon feedstocks.

If our petrochemical industry were to have feedstock costs 20 percent or more higher than other major producing countries as a result of imposition of an oil import fee, then not only would we lose the substantial positive contribution to the trade balance now made by petrochemical exports, but we would see our domestic market significantly eroded by lower-cost imports.

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[1] Import percentages are calculated on the basis of total imports excluding Puerto Rico, Virgin Islands and Hawaii Foreign Trade Zone, since receipts from these sources are not true imports.

Energy is also a major cost factor in the production of steel, aluminum, copper and other primary metals. The problems with import competition in these industries are well known, and would only be exacerbated by adding to production costs relative to the rest of the world.

Even agriculture, which is not generally thought of as an energy-intensive sector, would be adversely affected by an oil import fee. Among the important energy and energy-related inputs are tractor and other equipment fuel, fertilizers, pesticides, fuel for crop drying and fuel-related transportation costs to distant markets.

Other Implications

These remarks have been limited to the specific trade effects of an oil import fee. Other considerations include the relatively small net contribution for budget reduction after secondary effects have been taken into account, possible adverse effects on high-debt oil-exporting countries, complexity and cost of administration (especially if various regional and/or sectoral exemptions are granted), and the questionable positive effect on domestic oil production unless a very large fee is imposed. I leave it to other agencies with expertise in these areas to comment on such other factors.

I will be pleased to try to answer any questions you may have on trade policy considerations.

The CHAIRMAN. There has been some speculation as to the effects of an oil-import fee and how much will be absorbed by producer countries, or producer entities, and how much would be passed on in price of raw product. Mr. Ross, in looking at that kind of question, has Treasury made any conclusion of what proportion of an oil-import fee would be met by a reduction in price on the part of producers?

Mr. ROSS. Mr. Chairman, I believe our analysis was that—take the case of a $5 per barrel fee, just as a hypothetical, that foreign domestic producers would absorb approximately $1 per barrel of that fee, and thus, in effect, $4 would be passed on to consumers.

The CHAIRMAN. So, the foreign producer would absorb $1?

Mr. ROSS. Yes. That was the assumption used in our analysis.

The CHAIRMAN. All right. That is an assumption. How do you arrive at that assumption? Why does a producer lower its price because the finished cost would be higher?

Mr. ROSS. I am not an economist, but I think the basic explanation would be that in an attempt to retain their existing market share, they would not——

The CHAIRMAN. Their existing market share against whom? Other foreign producers, or against domestic——

Mr. ROSS. Well, against domestic producers, as well.

The CHAIRMAN. It is just price competition, then?

Mr. ROSS. I believe it is simply price competition. There would be resistance to absorbing the full price increase in the market.

The CHAIRMAN. Mr. Wendt, have you made any such study?

Mr. WENDT. Mr. Chairman, we don't have an analysis that would yield a precise conclusion, but we would expect that in a weak oil market, inevitably some of the incidence of that fee would be shifted back on the producers. The United States would be importing less oil. We would be producing more oil domestically.

The CHAIRMAN. Now, can I analyze that for just a moment? If you assume that the U.S. producers are meeting—the only effect that it would have would be that it would maintain the domestic prices at slightly higher level, and therefore, you would have a slightly lower decline in domestic production. Is that the basis upon which you make the statement?

Mr. WENDT. Well, since U.S. producers would receive a higher price, presumably they would produce more than they would at a lower price.

The CHAIRMAN. That is right. And with the declining price, the price stays down and it offsets a decline that otherwise would take place in domestic production.

Mr. WENDT. At least in the short run, domestically I believe that is true.

The CHAIRMAN. All right. How much of it then would be absorbed by foreign producers?

Mr. WENDT. I couldn't tell you exactly how much, but we would expect perhaps $1 or $2. It would depend very much on what other oil-importing countries would do. If other OECD countries, for example, followed the U.S. example and imposed a fee, it would have a greater incidence on the world oil market in terms of tending to drive down the world price.

If OPEC countries all try to maintain their exports at the same level as existed before the fee, you would have greater supply and less demand on the world market. As our own production goes up, it tends to force down the price in a weak market.

The **Chairman**. In a weak market. You are assuming the market would continue to be weak?

Mr. **Wendt**. I am assuming that there is still substantial supply overhang in the market; yes.

The **Chairman**. And there will then continue to be competition for markets?

Mr. **Wendt**. Yes, sir.

The **Chairman**. Mr. Wilson.

Mr. **Wilson**. No. I have to defer to my colleagues on that particular question.

The **Chairman**. Mr. Wendt, some assert that because the United States depends upon Persian Gulf oil for only 2 percent of our oil supplies, that oil supply disruptions originating there would have little if any impact on the United States. Do you agree with that?

Mr. **Wendt**. No, sir. I don't. I think that is a fallacy. As you yourself pointed out earlier this morning, the world oil market is fungible. What causes economic damage in a supply disruption is the rising price and we are not insulated from rising oil prices in the world market. Even if we didn't get any oil at all from the Persian Gulf, if there were a significant supply disruption, it would drive up the world price and we would be affected and our economy would be damaged accordingly. So we cannot be indifferent, regardless of our own degree of dependence on physical oil from the Persian Gulf.

The **Chairman**. Mr. Wilson, do you have any further comment on that subject?

Mr. **Wilson**. No, sir.

The **Chairman**. Mr. Wendt, on page 4 of your statement, you referred to rising excise taxes and point out that the IEA has reported increase in Denmark, Austria, and Italy and the trade press reports similar tax developments in Ireland, Greece, Spain, and Portugal.

Do you have the information, or shall we get from them the amount of those tax increases?

Mr. **Wendt**. We will be happy to supply you with that information, Mr. Chairman.

The **Chairman**. If you would do so, please.

Senator Nickles.

Senator **Nickles**. Thank you, Mr. Chairman. I will follow up on the same line. I had said something to staff about asking the question, or in writing—Mr. Wendt, I am interested in knowing what the tariffs are, or import fees are on other countries. Do you happen to have that information?

Mr. **Wendt**. Senator, I don't have the details here, but we have the details and will be happy to supply them. But our understanding is that these are essentially internal excise taxes; they are not import fees. They are consumption-type taxes, and although it is not the purpose of the hearing this morning to consider alternatives to an oil-import fee, speaking hypothetically, if the United States were to impose a higher excise tax on gasoline, it would be viewed in the same light as we might view these excise taxes that have been imposed by some of our partners in the IEA.

Senator Nickles. For example, does Japan have an import fee or an excise tax on imports?

Mr. Wendt. Not to my knowledge.

Senator Nickles. Anyway, would you provide that for the committee? I would be interested in—possibly if you have a list on other major oil-importing countries, it would be informative.

Mr. Wilson, you mentioned GATT. Is Saudi Arabia a member of GATT?

Mr. Wilson. No, sir. It is not. Right now they are looking into the possibility of joining GATT and they have asked for observer status in the GATT. They are not currently a member of GATT.

Senator Nickles. Well, my opinion has not been real high of GATT, but the Saudis joining it, that would be an interesting thing.

We have, Mr. Wendt, laws against, or providing for some I guess protection against other industries, say steel, if we find that Korea or some other country dumps a lot of steel into this country. Do we have restrictions against that?

Mr. Wendt. We certainly have our trade laws, with which you are familiar, Senator. I have my colleague here from the Special Trade Representative's Office, who would be fully qualified to talk about that, I am sure.

Senator Nickles. Mr. Wilson.

Mr. Wilson. If you have a dumping situation, Senator, we have antidumping laws in this country.

Senator Nickles. Does that apply to oil?

Mr. Wilson. It applies to any imports.

Senator Nickles. I made my mention of my belief—if the Saudis so desired, they could increase the production, say, to 8 or 9 million per day, in a very short period of time, and I would guess if they did that, and other countries' production remained relatively constant, that you would probably see oil at the price of anywhere from $3 to $5—I don't know. If they did that, do you think section 232 of the Trade Expansion Act would apply?

Mr. Wilson. Well, first of all section 232 of the Trade Expansion Act, I believe, is the national security provision of our trade laws. With respect to the applicability of the antidumping statute to a sudden surge of imported petroleum, that is an interesting proposition. I have never really heard it discussed.

One of the requirements for obtaining relief under our dumping statutes is the necessity of our domestic industry to prove injury. Now, I am not saying that the industry could not prove injury if there were a sudden surge, let's say, of Saudi oil in the domestic market.

I have never heard, as I say Senator, anyone talk about applying the traditional trade statutes to petroleum imports. It is an interesting concept.

With respect to section 232, the national security provisions of our trade law, the criteria for that are different. I believe, if I am not mistaken, and Allan, perhaps you can help me on this; we have invoked section 232 in the past.

Maybe you could provide some details.

Mr. Wendt. For what?

Mr. Wilson. On petroleum imports, if I am not mistaken.

Mr. Wendt. I believe that is true.

Senator Nickles. On refined products, or what?

Mr. Wendt. Refined products and I think crude. We can check that. Under the Nixon administration, I believe it was done.

Senator Nickles. Would you supply that for the committee? I am not aware of that being done, but I am wondering if it is applicable in this case, or was it applicable in the case before?

Mr. Wendt. I know that our domestic refiners have not sought any help under our trade laws, although they could if they felt they had a case.

Senator Nickles. Mr. Ross, were you wanting to chime in? Well, let me just ask you a quick question. On the tax policy side of it, if we will say that the Saudis decided to—they did not come to an agreement in the last 10 days, and therefore, they felt greater pressure was necessary to make their OPEC brethren come into some production agreements—reductions—so they decide, well, we will throw a little more heat on the fire and increase our production up from 4.5 say to 6, and therefore prices will fall into the $8 range.

Would the Treasury Department, at some range, if price gets below $6 and you see zero joint activity and permanent shutting in of a lot of wells—Senator McClure mentioned two-thirds of the wells in the United States—400,000-some are stripper wells. Would the Treasury or some agency start thinking, wait a minute; we are becoming far too dependent and therefore, maybe some type of a fee to offset those reductions—you know, most of the time, I think the administration when they talk about these proposals, import fees, we are still thinking of oil in the $20 range. If we are talking about oil in the $10 range, would one be more receptive?

Mr. Ross. Senator, it is somewhat difficult to speculate on that. Obviously, if at some point the domestic industry is simply mortally threatened, people might want to take a look at oil import fees. I would think that for the moment to say that the administration doesn't believe that danger is yet at hand—at least it has not recommended a fee on imported oils as a response to the present problems the industry faces.

Senator Nickles. You think at $6 oil, they might consider it?

Mr. Ross. I wouldn't rule it out, but I think it is probably unwise for me to speculate about how low oil prices would have to go, how serious the industry's situation would have to become.

Senator Nickles. Just a quick comment. I hope that the Treasury Department and the Department of State stays on top of this, as I hope the Secretary of Energy does. I think the Secretary of Energy was surprised, as I was, when I read the Oil Daily and found out we had 1,063 rigs.

When we had our hearing, Mr. Wendt, 2 weeks ago, our close briefing, we had 1,200. So, it has been declining substantially. Oil prices, again according to Oil Daily, and we are looking not at major grades, but several grades in Wyoming, one in North Dakota is $11.35, others $12.25, $13.50. So we are looking at very much a precipitous drop and there is a direct correlation of those price drops in rig activity. And, I am telling you whether I think you want to hear it or not that our dependency on imports is going to increase substantially.

It took a level drilling count of at least 2,500 active rigs to keep our production somewhat level, around 8.5 to 9 million barrels per day. Now that we are drilling around 1,000 rigs, and that number is just because they already had contracts—when those contracts expire, those rigs are going off. And if the prices stay low, they are not going back on.

That is going to give us, long term—I am just telling you right now, our dependency is going to increase a lot more. I was very disappointed in the Secretary's and Mr. Boggs' statement 2 weeks ago, this assumption that we would never be up there—our dependency is going to increase even if prices do rebound in the short order, because the activity is not out there. At some point, either for national security reasons, or for fear, or not wanting to be in the same cycle that we have been in twice in the 1970's, I think would have to merit some consideration.

Mr. Ross, you heard my question about a windfall profits tax?

Mr. Ross. Yes, I did.

Senator Nickles. We are well below that threshold. I have introduced legislation, along with Chairman McClure and others, that would repeal the windfall profits tax. Would the Treasury Department support that proposal?

Mr. Ross. I don't believe the Treasury Department has a formal position on that.

Senator Nickles. Would you get one for me?

Mr. Ross. Certainly. The President, I think, has previously indicated that when fiscally possible, he would like to see the tax repealed.

Senator Nickles. It is fiscally possible.

Mr. Ross. It is raising very little Federal revenue now.

Senator Nickles. It is raising zero revenue, and would you also provide for this Senator the number of individuals and the amount of money that is presently being expended by the Treasury Department to compile all the data? I can tell you that the private industry, although we are well below the thresholds today, is still spending a lot of money computing on tier 1, tier 2, tier 3.

Tier 1 still has a tax rate of 70 percent for any oil above $19; that is asinine. I think prices will be—one of the things about this policy that is happening—I think the Saudis are flexing their muscles for a purpose. They are going to increase prices in the future, and I want to see the windfall profits tax off for when those prices do increase.

If you would, give me an accounting of how much the Treasury Department is spending right now for compliance with that ridiculous law, and also, hopefully, the administration's support for repeal of it.

Mr. Ross. Senator, I will get that information for you.

Senator Nickles. Thank you, Mr. Chairman.

The Chairman. Mr. Ross, in the ebb and flow of discussions about tax legislation, the administration is called upon to answer questions at various times, in various settings, but the background always changes. I know what you have said in the past, but I want to ask you again this morning, knowing that it is in part redundant, but also knowing things always change: What is the administration's position with respect to intangible drilling costs?

Mr. Ross. Mr. Chairman, the President's proposal on fundamental tax reform proposes retention of the current law provision that allows intangible drilling costs to be expensed. It is perhaps also noteworthy that the Finance Committee, which has just recently begun its markup of tax reform legislation, would, under Chairman Packwood's proposal, also retain expensing of intangible drilling costs. Treasury has been supportive of that approach.

The CHAIRMAN. What is the relationship between that provision, of expensing IDC, with the notion of a corporate minimum tax?

Mr. Ross. Mr. Chairman, as you may know, there are in a sense two tax systems in current law today, as well as under the President's tax reform proposal and the one before the Senate: the so-called regular tax, and to the extent the regular tax liability is not at a certain level, a minimum tax liability is imposed. For purposes of that minimum tax, intangible drilling costs would be taken account of to some extent. That is, both under the President's tax reform proposal, and the current markup proposal submitted by Chairman Packwood.

The CHAIRMAN. To some extent?

Mr. Ross. Yes.

The CHAIRMAN. To what extent?

Mr. Ross. I believe it reflects a 10-year amortization schedule. There is however, in addition, an income offset available, so that to the extent of income produced by the properties, IDC's would not even be reflected in the minimum tax base.

The CHAIRMAN. But you wouldn't have gotten IDC's on the schedule. They would sit as simple expensing?

Mr. Ross. That is true under current law. They would be on a schedule, but, again, there is an income offset. So, to the extent you are using IDC's to simply offset income produced from oil and gas properties, there would not even be a minimum tax exposure.

The CHAIRMAN. Under both the administration's proposal and under the Packwood?

Mr. Ross. The administration's proposal was a somewhat different concept. But the Packwood proposal and current law both allow full income offset. Again, the administration—Treasury has been supportive of Chairman Packwood.

The CHAIRMAN. Mr. Wendt and Mr. Wilson, you both speak of increased competition from other sectors of the world's economy. If I recall correctly, the Japanese import over 90 percent of their energy. To the extent that energy is a cost in production, any import fee that we pay that they do not increases their capacity to compete in our markets and to compete with us in world markets. Is that not correct?

Mr. WENDT. Yes, sir.

The CHAIRMAN. Mr. Wilson.

Mr. WILSON. Yes, sir.

The CHAIRMAN. Is the matter of concern to the Trade Representative?

Mr. WILSON. It is a matter of great concern, Mr. Chairman, and I think, as I outlined in my remarks, this is one of the very fundamental concerns we have from a trade policy perspective, about the imposition of an oil import fee.

The CHAIRMAN. As you probably can tell by the buzzers that are going off in the background, there is a vote on the floor of the Senate. I think this might be a good point for us to break, and excuse this panel. Thank you for your testimony. I would indicate that there will be some questions for response in writing to the record.

We will recess, subject to call of the Chair, and we will hear the final panel upon my return. Thank you, very much.

[Whereupon, the hearing was recessed, subject to the call of the Chair.]

The CHAIRMAN. The meeting will come to order.

Mr. Shumway, from the FDIC, and Mr. Fiechter, from Comptroller of the Currency.

Gentlemen, thank you, very much for your patience in waiting for your turn to testify here today. We appreciate your willingness to be here and your entire prepared statements will be placed in the record, and you are invited to summarize or highlight those statements in whatever way you desire.

Mr. Shumway.

## STATEMENT OF ROBERT V. SHUMWAY, DIRECTOR, DIVISION OF BANK SUPERVISION, FEDERAL DEPOSIT INSURANCE CORPORATION

Mr. SHUMWAY. Thank you, Mr. Chairman. In the interest of saving time, I will not read the entire statement. Let me focus just on the last part of my statement, which has to do with the drop in oil price's effect on the banking industry.

For many banks located in the Southwest, and for those other institutions with oil and gas loan concentrations, the overall impact of lower oil prices, to one degree or another, will result in higher levels of nonperforming assets, above normal loan losses, reduced earnings, and slowed asset growth.

These projects represent a continuation of the general deterioration we have seen occurring in banks located in the Southwest region, consisting of Arkansas, Louisiana, New Mexico, Oklahoma, and Texas.

In 1981, the annual asset growth rate of banks in the region was 18.8 percent, or twice the national average of 9 percent. However, by 1984, it had dropped to 4.2 percent, which is nearly 30 percent below the national average. Nonperforming assets, as a percentage of total assets, increased each year in the region, from 1982 to 1984, and exceeded the national average for the first time in 1984.

Net loan chargeoffs also have been above the national average since 1982. Earnings in capital trends remain relatively good in comparison to the averages for all banks nationally. However, the Southwest banks may have difficulty maintaining this position over the next few years.

As a result of our concern over some of the above-noted economic and bank trends, we conducted an informal survey of our regional offices in January of this year to determine the potential effects on

State-chartered, FDIC-insured institutions if the price of oil should decline substantially.

The survey identified those energy banks with over $100 million in total assets in each respective region, and obtained certain information to help us monitor and supervise those banks more closely. An energy bank, for the purpose of the survey, was defined as one that had concentrations of at least 25 percent of total capital in oil and gas loans.

Obtaining a complete list of so-called energy banks is not as easy as it seems since the banks' reports of condition do not contain any segregation of energy loans, per se. Also, there is no common definition for precisely what is an energy bank.

The FDIC survey, in conjunction with information on nationally chartered received from the Office of the Comptroller of the Currency, identified 563 energy banks throughout the banking industry. We identified over $61 billion in energy loans in these institutions, $57 billion of which are held by 59 banks with total assets each of over $1 billion.

In other words, approximately 92 percent of the total energy loans identified from the survey are concentrated in the large regional and multinational banks across the country. The above-total loan amount, however, does not include United States bank exposures to less developed countries, such as Mexico and Venezuela, as well as energy loans in banks that were not captured by the survey.

Approximately 65 percent of the oil and gas credits held by these large banks are $20 million in size or larger. These credits are reviewed annually by examiner teams from each of the three Federal bank regulatory agencies under our Shared National Credit Program.

The findings of the last review conducted in April 1985, indicate that 17 percent of the oil and gas credits were criticized, compared to only 5 percent for all other industry loans reviewed. As a result of the decline in oil prices, we expect this percentage to increase at the next review, which will be conducted soon.

The 500 smaller community banks that were identified in the survey are located principally in Texas, Oklahoma, and Louisiana. Our examiners most familiar with oil and gas credits indicated that the greatest risk of loss is present in loans to independent oil companies involved principally in exploration and production activities, and in loans to the service sector.

Available information suggests these types of loans are, for the most part, not very prevalent in smaller institutions. The one exception to this general comment involves banks in Oklahoma, where it is reported many loans are production-type credits.

Loans to the 10 largest integrated oil companies will be least affected by the drop in oil prices due to the fact that they are more diversified, generally have stronger balance sheets, are able to cut back capital expending in exploration budgets, and, therefore, are better able to absorb losses.

While we lack reliable statistics, the smaller institutions in Texas, Oklahoma, and Louisiana appear to be most vulnerable to the ripple effects in the economy. These community-type banks have less flexibility to diversify their loan portfolios, since they are small, mostly independent institutions operating under limited branching powers. Those banks that have attempted to diversify into such areas as real estate and agriculture are also discovering problems in these industries.

A look at the failed bank statistics for these three States, particularly Texas and Oklahoma over the past 5 years, also suggests that the region's banking problems may be getting worse than those of the Nation as a whole.

In 1981, there were no bank failures in this area, but from 1982 through 1985, Texas and Oklahoma experienced 28 and 22 bank failures respectively, with the largest number of bank failures in each State occurring last year.

In 1985, Texas and Oklahoma, together, experienced 25 bank failures, as compared with a total of 120 in the United States, as a whole.

These 2 States had 20 percent of the 85 bank failures but account for only 16 percent of all banks in the country. Thus far, in 1986, these two States have experienced five bank failures.

In light of recent economic events, current trends suggest that, at least for the next year, bank problems and failures in this area are likely to continue at levels at least equal to and quite possibly higher than those experienced in 1985.

I can assure you, though, that the FDIC, as well as the other bank regulatory agencies, are carefully monitoring the situation through our examination programs, offside monitoring systems, and special surveys of the kind I have previously discussed.

Most of the area banks remain in sound condition. For those institutions that are experiencing problems because of economic conditions, but are well managed, the banking agencies are working together to develop initiatives that will help the banks through this difficult period.

To enable us to deal more effectively with failing and failed bank situations, we proposed to the Senate Committee on Banking, Housing, and Urban Affairs on March 13, a legislative package, including a Federal depositor preference statute, the interstate provision of Garn-St Germain statute be extended to permit the interstate acquisition of failing banks, which have assets of $250 million or more, and that the FDIC be empowered to operate a bank for a limited period of time while we put together an orderly acquisition.

We strongly believe that these recommendations are essential to greatly increase our options for handling bank failures, and to reduce the overall cost to the FDIC insurance fund, thereby contributing to the stability of the banking system.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Shumway follows:]

# STATEMENT ON

# THE DECLINE IN OIL PRICES AND ITS
# IMPACT ON THE BANKING INDUSTRY

PRESENTED TO

COMMITTEE ON ENERGY AND NATURAL RESOURCES
UNITED STATES SENATE

BY

ROBERT V. SHUMWAY
DIRECTOR
DIVISION OF BANK SUPERVISION
FEDERAL DEPOSIT INSURANCE CORPORATION

Washington, D.C.

March 25, 1986
9:30 a.m.

Mr. Chairman, members of the Subcommittee, we appreciate this opportunity to discuss the impact the precipitous decline in oil prices is having on the banking industry and to outline the steps the FDIC has taken and is taking to assess this situation. Before I discuss the impact we see on banks with loan concentrations in the oil and gas areas and particularly banks located in the Southwest, I would like to take a few minutes to discuss the trends we perceive in the oil and gas industry.

## Economic Trends In the Energy Industry

While oil prices have fallen dramatically over the past four months to the lowest levels in over seven years, fundamental forces have been adversely affecting the oil industry since the early 1980s. On the supply side, we have seen the emergence of a large and persistent surplus of oil production capacity with significant increments of production in Alaska, Mexico, and the North Sea coming on-stream. As a result, non-OPEC producers have increased their share of the world oil market. Non-OPEC producers are, for the most part, medium and high-cost producers who supply at or near capacity. OPEC, on the other hand, is composed of the marginal or swing producers, supplying the extra oil required in the world market. Since 1979, daily OPEC production has declined dramatically from 31 million barrels to roughly 16 million barrels due, in great part, to a decline in world oil demand and Saudi Arabia's willingness to limit its production in order to prop up oil prices in the marketplace.

On the demand side, three fundamental forces have been at work. First, the rate of growth in the economy of the industrial world has declined substantially within the last ten years with annual growth rates about one-half of what was experienced between 1960 and 1973. Second, the demand for energy has declined as a result of government-sponsored conservation programs implemented in the early 1970s and changes in the habits and behavior of consumers to conserve energy. Over the last ten years, energy demand has grown at only a fraction of the rate experienced between 1960 and 1973. And third, the demand for oil has declined as the availability of alternative energy sources, most notably natural gas, has increased.

The steep decline in oil prices during the first quarter of 1986 culminates a four-year period in which competition has been intensifying among energy producers while the previously noted energy demand has been moderating. The recent decline in oil prices is due, in great part, to Saudi Arabia increasing its daily production from two to four million barrels a day, reversing its policy of accommodating the other 12 OPEC nations who have been producing oil above their agreed upon allotments in order to maintain needed revenue levels. In doing so, Saudi Arabia has demonstrated a willingness to try to enforce cartel discipline.

Prices have been quite volatile over this period with the one-month futures contract price of a barrel of West Texas Intermediate oil, considered the U.S. benchmark, declining from $31.72 on November 21, 1985 to $12.72 on March 14. Oil prices had declined some $6 between mid-November and year-end 1985 on the strength of widespread increases in output among producer nations and price-shaving by members of the 13-nation OPEC cartel. When it became clear in mid-January that Saudi Arabia intended to further expand its oil output, the spot price fell more than $5 per barrel in two days. This launched the world oil market into a spiral which sent prices well below $15 per barrel. In recent weeks oil prices have been somewhat more stable but, under existing demand conditions, any new rounds of competition among the low-cost oil producing OPEC nations and other producers could generate further steep declines in oil and natural gas prices.

At present, most forecasters do not anticipate a prolonged price war, but all recognize it as a realistic possibility. While there is less consensus among oil forecasters now than at any time in the past, the most likely scenario we have seen appears to be that prices will remain near current levels or perhaps rise modestly until the end of the decade. Major producer nations will probably seek to avoid destructive competition through production agreements, and energy conservation is likely to lose some of its momentum over this period. For the longer term, it appears that, even in the absence of new oil and gas discoveries, average price increases of three percent annually are about as large as can be expected. This suggests that inflation-adjusted oil prices will be unlikely to recover their 1984 levels by the year 2000, and they could remain vastly lower than their 1981 peaks. Therefore, even without considering the very real threats which could precipitate another oil price plunge, the near, and possibly the more distant, future appears to hold much lower energy prices than had been expected until recently. A growing minority view, however, sees energy shortages reoccurring by the mid-1990s with OPEC again assuming control of world oil prices and the U.S. again becoming dependent on the Middle East to meet its energy needs.

For the bulk of the U.S. economy, the outlook for low oil prices is a positive one. If energy costs remain below their 1985 levels as expected, economic growth in 1986 is likely to be higher, while inflation and long-term interest rates are likely to be lower than otherwise. The magnitudes of these effects are presently uncertain, but it has been suggested that a full percentage point may be added to 1986 real GNP growth if oil prices remain under $18 per barrel. There is already some indication from the bond market that the oil price outlook is consistent with a lower interest rate environment. Yields on ten-year Treasury bonds have fallen 200 basis points since November 1985, when oil prices also began to retreat from their 1985 highs. Other forces no doubt are at work in reducing long-term rates, but investor optimism regarding oil prices may remove one obstacle to this process by easing inflationary expectations.

Estimates of energy's impact on inflation are highly speculative, but prices of consumer goods as measured by the consumer price index could decline more than one percent if oil prices remain in the neighborhood of $15 a barrel for 1986. In any case, the current prices for oil and natural gas could represent tens of billions of dollars in savings to American consumers by the end of this year. As new purchasing power would be freed for diverse uses, this benefit to consumers would undoubtedly redound on the vast majority of domestic industries and most financial institutions.

## The Southwest Economy

The prospects of lower oil prices have a radically different implication for the energy-producing regions of our country, principally the Southwest and most notably the States of Louisiana, Oklahoma and Texas. They face a probable extension of the difficult adjustment period which already has resulted in large economic losses in that part of the United States. In 1985 alone, the effects of depressed energy prices held economic growth to under one percent for Louisiana and

Oklahoma, while the previously brisk expansion of the Texas economy slowed to nearly two percent real growth. Louisiana's rate of unemployment hit 11 percent in November 1985 and, by year's end, the unemployment rate in Texas may have exceeded the national average for the first time in 15 years.

The losses extend far beyond the oil and natural gas industries for these regions. Faltering energy prices have depressed real estate markets in several areas of Oklahoma, Texas and Louisiana. Office vacancy rates were as high as 25 percent in Houston and 17 percent in Dallas during 1985, and residential building permits issued in Louisiana declined by more than 25 percent from year-earlier levels. In addition, it has been estimated that Texas will lose $100 million in state revenue, 25,000 jobs, and $3 billion in economic activity for every $1 drop of oil prices below their average levels of $25 a barrel calculated for 1985. At $15 per barrel, Texas would lose roughly $1 billion in taxes, 250,000 jobs, and $30 billion in gross state product from its $250 billion economy. Louisiana's economy is similarly dependent upon its energy sector, with nearly 40 percent of state revenues having come from oil and natural gas production in past years. Overall, these state economies are roughly five times more dependent on energy production than the nation as a whole.

Moreover, the secondary effects in these regions are likely to multiply the longer oil prices remain at current levels. The figures just cited may underestimate the long-term economic damage. High vacancy rates will translate into less new construction. Local government revenues will diminish along with the state revenues. In the process, public sector jobs will be lost and the service economy will contract as the ripple effects of low oil prices overwhelm an increasing number of its customers. Hence, our energy-producing areas appear to face a relatively difficult economic future if oil and natural gas prices remain at depressed levels.

## Impact on the Banking Industry

For many banks located in the Southwest and for those other institutions with oil and gas loan concentrations, the overall impact of lower oil prices, to one degree or another, will result in higher levels of nonperforming assets, above normal loan losses, reduced earnings and slowed asset growth. These projections represent a continuation of the general deterioration we have seen occurring in banks located in the Southwest region consisting of Arkansas, Louisiana, New Mexico, Oklahoma and Texas. In 1981, the annual asset growth rate of banks in the region was 18.8 percent or twice the national average of 9.4 percent. However, in 1984, it had dropped to 4.2 percent or 28 percent below the national average of 5.8 percent. Nonperforming assets as a percentage of total assets increased each year from 1982 to 1984 and exceeded the national average for the first time in 1984. Net loan chargeoffs also have been above the national average since 1982.

Earnings and capital trends remain relatively good in comparison to the averages for all banks nationally, however, the Southwest banks may have difficulty maintaining this position over the next few years.

As a result of our concern over some of the above noted economic and bank trends, we conducted an informal survey of our regional offices in January 1986 to determine the potential effects on state-chartered FDIC insured institutions if the price of oil should decline substantially. The survey identified those energy banks with over $100 million in total assets in each respective region and obtained certain information to help us monitor and supervise those banks more closely. An energy bank was defined as an institution which reported concentrations of at least 25 percent of total capital in oil and gas loans. Obtaining a complete list of so-called energy banks is not as easy as it seems since Reports of Condition (Call Reports) completed by each institution do not contain any segregation of energy loans. Also, there is no common definition for precisely what is an energy bank or, for that matter, precisely what is an energy loan.

The FDIC survey, in conjunction with information on nationally chartered banks received from the Office of the Comptroller of the Currency, identified 563 energy banks throughout the banking industry, 245 of which are state-chartered institutions. We identified over $61 billion in energy loans in these institutions, $57 billion of which are held by 59 banks with total assets each of over $1 billion. In other words, approximately 92 percent of the total energy loans identified from the survey are concentrated in the large regional and multinational institutions across the country. The above total loan amount, however, does not include U.S. bank exposures to less developed countries such as Mexico and Venezuela as well as energy loans in banks not captured by the survey.

Approximately 65 percent of the oil and gas credits held by these large institutions are $20 million in size or larger. These credits are reviewed annually by examiner teams from each of the three federal bank regulatory agencies under the Shared National Credit Program. The findings of the last review conducted in April 1985 indicate that 17.5 percent of the oil and gas credits were criticized compared to only 5.4 percent of all other industry loans reviewed. As a result of the decline in oil prices, we expect this percentage to increase at the next review, scheduled shortly.

The 504 smaller community banks identified in the survey are located principally in Texas, Oklahoma and Louisiana, the three states identified as being most dependent upon the energy industry. Our examiners most familiar with oil and gas credits indicated that the greatest risk of loss is present in loans to "independent" oil companies involved principally in exploration and production activities and in loans to the service sector. Available information suggests these types of loans are, for the most part, not very prevalent in smaller institutions. The one exception to this general comment involves the banks in Oklahoma where it is reported many loans are production-type credits. Loans to the ten largest integrated oil companies (the Majors) will be least affected by the drop in oil prices due to the fact that they are more diversified, generally have stronger balance sheets, are able to cut back capital spending and exploration budgets and, therefore, are better able to absorb losses.

While we lack reliable statistics, the smaller institutions in Texas, Oklahoma and Louisiana appear to be most vulnerable to the "ripple effects" in the economy. These community-type banks have less flexibility to diversify their loan portfolios since they are small, mostly independent institutions, operating under limited branching powers. Those banks that have attempted to diversify into such areas as real estate and agriculture are also discovering problems in these industries.

A look at the failed bank statistics for these three states, particularly Texas and Oklahoma, over the past five years also suggests that the region's banking problems may be getting worse than those for the nation as a whole. In 1981, there were no bank failures in this area, but from 1982 through 1985 Texas and Oklahoma experienced 28 and 22 bank failures, respectively, with the largest number of bank failures in each state occurring last year. In 1985, Texas and Oklahoma together experienced 25 bank failures, as compared with a total of 120 in the U.S. as a whole. These two states had 20.8 percent of the 1985 bank failures but account for only 16.6 percent of all banks in the country. Thus far in 1986, these two states have experienced five bank failures. In recent years, Louisiana has experienced only three bank failures -- one in 1984 and two in 1986.

In light of recent economic events, current trends suggest that, at least for the next year, bank problems and failures in this area are likely to continue at levels at least equal to, and quite possibly higher than, those experienced in 1985. We can assure you, though, that the FDIC as well as the other bank regulatory agencies are carefully monitoring the situation through our examination programs, offsite monitoring systems and special surveys of the kind I have previously discussed. Most of the area banks remain in sound condition. For those institutions that are experiencing problems because of economic conditions but are well-managed, the banking agencies are working together to develop initiatives that will help the banks through this difficult period.

To enable us to deal more effectively with failing and failed bank situations, we proposed to the Senate Committee on Banking, Housing, and Urban Affairs on March 13 a legislative package including a Federal depositor preference statute, the interstate provision of the Garn-St Germain statute be extended to permit the interstate acquisition of failing banks which have assets of $250 million or more, and that the FDIC be empowered to own and operate a bank for a limited period of time while we put together an orderly acquisition. We believe these recommendations would greatly increase our options for handling bank failures and reduce the overall cost to the FDIC insurance fund, thereby contributing to the stability of the system.

The CHAIRMAN. Thank you.
Mr. Fiechter.

## STATEMENT OF JONATHAN L. FIECHTER, DIRECTOR, ECONOMIC AND POLICY ANALYSIS, COMPTROLLER OF THE CURRENCY

Mr. FIECHTER. Thank you, Mr. Chairman. I welcome this opportunity to discuss with you the views of the Office of the Comptroller of the Currency concerning the effects of the recent decline in energy prices on commercial banks with oil and gas loans.

In the interest of time, I will summarize what was even a summary—a lot of this information has been repeated before.

As you are well aware, economic conditions in the oil and gas industry have deteriorated rapidly since 1982. The problems, we believe, are similar to those being experienced in the agricultural sector. Inflation has been precipitously followed by deflation.

Without question, the difficult times now faced by energy companies and energy-dependent entities, are also being felt by banks that extended them credit. We have monitored the effects of the downturn on national banks largely through our special energy loan data reports that we collect on a quarterly basis.

The special report was first collected in December 1984, in response to falling oil and gas prices Special collection effort was necessary because the data on energy loans is not part of our standard financial statistics that we collect.

The special report is required of national banks with energy loans equal to 25 percent or more of their total capital in oil and gas loans.

Currently, 245 national banks, which represent about 5 percent of all national banks, ranging in size from $10 million to over $100 billion, are filing the special report. The report covers many types of oil and gas lending and includes the volume and credit indicators of the bank's oil and gas loans.

Most recent data that I will be presenting in this testimony is based on September 30, 1985, reports. Year-end data won't be available until mid-April. As a result, this information does not reflect the effects of the recent drop in energy prices.

The reporting banks have nearly $40 billion of oil and gas loans on their books. I should note that this figure does not capture all of their loans to oil-exporting IDC's, even though the quality of such loans may be dependent upon conditions in the oil industry. We have aggregated the data into five major categories of energy borrowers.

Banks report that the largest proportion of loans, 37 percent of the total, is extended to independent producers. Loans to firms that drill for oil and gas and supply equipment and related services are a little over 16 percent of the total. The 20 firms that we identified as majors in the instructions to our call report, represent approximately 9 percent of the loans. The remainder is distributed among the collection of companies engaged in the distribution, refining of energy products, and other activities related to the oil and gas sector.

We also have information from the banks on the quality of these loans.

As shown in the table in our testimony, at the end of last September, slightly more than $3 billion, or approximately 8 percent of total oil and gas loans are reported as nonaccruing. By comparison, nonaccruals for commercial-industrial loans in the national banks represent approximately 3 percent.

A loan generally is classified as nonaccruing when a borrower is not meeting or cannot be expected to meet all the repayment conditions of the underlying loan agreement.

Among the borrower categories, loans to refiners and the oil service companies show the highest percentage of nonaccruing loans. It is 20 and 16 percent respectively. Comparable percentages for the independents and those in the other category are in the 7- and 4-percent range.

The majors show virtually no nonaccruing loans.

The special report also enables us to ascertain how those loans are distributed among the national banks. For example, 9 of our 12 multinational banks hold nearly 58 percent of reported total oil and gas loans, or $23 billion. Ninety percent of the reported oil and gas loans are held by banks with assets in excess of $1 billion.

In terms of location, 76 percent of the banks reporting oil and gas loans are based in Kansas, Louisiana, Oklahoma, and Texas. They hold about a third of the reported loans.

In assessing the affects of oil and gas lending, it is important not to lose sight of the fact that for most of these banks, such loans are not the only loans in their portfolios, nor are they necessarily the most significant.

Generally, banks reporting oil and gas loans hold diversified portfolios. As shown in the tables in my testimony, among all reporting banks, oil and gas loans represent approximately 9 percent of total loans.

Additional insight can be provided by examining in somewhat greater detail the financial performance of the reporting banks. Because of the great discrepancies among banks, in terms of their size and relative importance of oil and gas in their portfolios, what we looked at was median data, meaning data that is not quite so sensitive as average data to the bias of extremely large or a lot of small banks.

Earnings in capital at the reporting banks are clearly under pressure. The median primary capital ratio of these banks is 8 percent, slightly below the median primary capital ratio of 8.7 for other national banks.

The median return on assets, that is income divided by the assets of these banks, was seven-tenths of 1 percent compared to 1 percent for other national banks. So capital and their earnings are both, as of September 30, below that of banks that don't hold the oil and gas loans.

In part, because of the effect on the Southwest economy, the downturn in the oil and gas industry, many of the banks with oil and gas loans are reporting increased problems with credits in other loans. These include loans to local real estate and to other industries linked to the oil and gas sector.

As a result, the median nonaccrual rate on all loans at banks reporting oil and gas loans is approximately 3 percent, compared to only eight-tenths of 1 percent for the median of other national banks. Moreover, approximately 18 percent of these banks reporting oil and gas loans are on our problem bank list, compared to only 5 percent of other national banks.

Certain banks in the Southwest with oil and gas loans and loans to other sectors within the region face major earnings challenges in the years ahead. If oil prices should remain below $20 for an extended period of time, we would expect the quality of oil and gas loans to decline, further reducing earnings and requiring additional loan loss reserves at these banks.

The situation, therefore, merits our continued viligance and sensitivity. Recovery of the banks with substantial oil and gas loans depends on a period of increased financial stability within the oil and gas industry. In the interim, these banks with the support and encouragement of all the bank supervisors are pursuing loan workout plans in an effort to ease the financial pressures faced by their oil and gas borrowers.

We believe the workout strategies are a prudent banking practice when based on realistic projections of the borrower's ability to repay their debt. Our office is currently reviewing bank practices and its own present policies and procedures regarding credit evaluations and loan restructurings.

We wish to make certain that the environment is conducive for banks to restructure problem credits of their borrowers with reasonable long-term prospects, provided such action is consistent with safe and sound banking practices.

This will benefit both banks and their borrowers. Thank you, Mr. Chairman.

[The prepared statement of Mr. Fiechter follows:]

STATEMENT OF
JONATHAN L. FIECHTER
DIRECTOR, ECONOMIC AND POLICY ANALYSIS
OFFICE OF THE COMPTROLLER OF THE CURRENCY
BEFORE THE
COMMITTEE ON ENERGY AND NATURAL RESOURCES
UNITED STATES SENATE
March 25, 1986

## INTRODUCTION

Mr. Chairman and members of the Committee, I welcome this opportunity to discuss with you the views of the Office of the Comptroller of the Currency (OCC) concerning the effect of the recent decline in energy prices on commercial banks with oil and gas loans.

The OCC is the primary regulator and supervisor of the national banking system. As of year-end 1985, there were 4,900 national banks, representing one third of the total number of insured commercial banks and holding approximately 55 percent of total commercial bank assets.

The majority of national banks are in good health. However, unusually volatile economic activity in recent years has caused an increase in the number of problem banks and bank failures. That increase reflects, for the most part, sharp declines in certain sectors of the economy such as agriculture and energy.

This morning I would like to provide a brief summary of problems in the oil and gas sector and describe the effect of these problems on the financial performance of national banks with significant oil and gas loans.

## THE PROBLEMS IN THE OIL AND GAS SECTOR

As you are well aware, economic conditions in the oil and gas industry have deteriorated rapidly since 1982. The problems are similar to those being experienced in the agricultural sector -- inflation has been precipitously followed by deflation. In just the last 10 weeks, the spot price for oil has fallen over 50 percent.

The sharp drop in oil prices is, of course, good news for consumers. To varying degrees, the falling cost of energy means reduced upward pressures on the market prices of all goods and services, a further abatement of inflationary pressures.

The downturn, however, has caused declines in the values of oil and gas equipment and reserves and has reduced cash flows, eroding the capacity of many energy borrowers to meet their debt obligations. Planning under these circumstances and evaluating future financial prospects becomes increasingly difficult, even for the major companies that dominate the industry.

The major oil companies are only about 20 in number, but they control about 80 percent of the oil and 60 percent of the gas reserves in the U.S. These companies are vertically integrated and most of them are financially strong. They typically retain borrowing capacity from a variety of sources, including the commercial paper market. As a result, the banking industry's exposure to those companies is relatively low. The major companies are responding to the weakness of oil prices by restructuring themselves, both financially and operationally.

In contrast to the majors, there are approximately 600 publicly owned companies in the U.S., mostly of small and medium size, and thousands of partnerships and individuals, engaged in operating oil and gas fields. Many of these "independent producers" appeared after the first oil shock in 1973. Due to their smaller base of oil and gas reserves and their need to reinvest continually in the search for new fields, the independents leverage themselves more highly than the majors.

Declining cash flows and reserve values are eroding debt servicing capacity at these independents, which were also hit hard by the back-to-back recessions of 1980 and 1981-1982. Falling oil prices and a heavy debt load are forcing many independent producers to cease exploration activities and, in essence, liquidate their existing assets. Some analysts warn that a large number of the independent producing firms nationwide may go out of business in the next two years.

The problems of the production companies have, in turn, hurt the service and equipment companies. U.S. drilling rig activity is down to 1,137 active units, compared to 1,950 at the close of 1985 and 4,520 at the end of 1981. The oil service industry is suffering from excess capacity and it is predicted that significant consolidation will occur in the coming months.

The only oil-related business to benefit, over the near-term, from falling oil prices is refining. Its operating margins are growing because the cost of its raw material -- crude oil -- is falling faster than the price of its output -- refined products. Lower output prices signal larger sales of refined products, further bolstering the financial position of refiners and their ability to service their debt.

The general decline in the oil and gas industry has also adversely affected individuals and businesses in states whose economies are dependent upon the energy industry. Reduced employment in energy and energy-related industries such as oil-field machinery and petrochemicals, has led to reduced demand for residential and commercial properties and for an array of goods and services. Declines in state revenues have caused reductions in some state-provided services.

The consequences of volatile oil prices go far beyond the U.S. economy. For example, a prolonged drop in the price of oil will depress oil export revenues of the major oil-producing less developed countries (LDCs). While it is not possible to give precise estimates of the overall impact, clearly a reduction in their foreign exchange earnings means a reduced ability of these LDCs to meet international debt service commitments. Although the prospects are uncertain, both the banks and their foreign debtors continue to work diligently at maintaining mutually satisfactory arrangements.

It should be noted, however, that there are benefits to some LDCs resulting from the lower oil prices. Oil-importing LDCs will benefit internally from faster growth and lower inflation. Continued growth in the developed countries will also contribute to rising exports from the LDCs. Finally, lower oil prices contributed to the recent reduction in interest rates. According to Treasury Department estimates, that reduction will save LDCs somewhere in the range of $7-9 billion in interest payments on their commercial bank debt.

There appear to be few prospects over the near term for any significant reversal of current trends. Increased oil production by overseas producers, the breakdown of the OPEC cartel, and conservation efforts by consumers and corporations combined with modest economic growth in the industrialized countries may lead to energy prices stabilizing at levels well below those of the early 1980s. As a consequence, the oil and gas industry will have to make major adjustments.

## COMMERCIAL BANK EXPOSURE TO THE OIL AND GAS SECTOR

Without question, the difficult times now faced by energy and energy-dependent entities are also being felt by the banks that extended them credit. We have monitored the effects of the downturn on national banks largely through our special energy-loan data reports that we collect on a quarterly basis. The special report was first collected in December 1984, in response to falling oil and gas prices. A special collection was necessary because data on energy loans are not part of regular bank Call Reports.

The special report is required of national banks with energy loans equal to 25 percent or more of their total capital. Currently, 245 national banks (about 5 percent of all national banks) ranging in size from under $10 million to over $100 billion are filing the special report. The report covers many types of oil and gas lending and includes the volume and credit indicators of the bank's oil and gas loans.

The most recent data on oil and gas exposure are based on the September 30, 1985 report. (Year-end data will not be available until mid-April.) The following describes the situation faced by the reporting banks as of September 30 and does not, therefore, reflect the effects of the subsequent drop in energy prices.

Reporting banks have nearly $40 billion in oil and gas loans on their books. I should note that this figure does not capture all of their loans to the oil-exporting LDCs, even though the quality of such loans may be dependent upon conditions in the oil industry. In the following table, we have aggregated the data into five major categories of energy borrowers. Banks report that the largest proportion of loans, 36.8 percent of the total, is extended to independent producers. Loans to firms that drill for oil and gas, and supply equipment and related services are a little over 16 percent of the total. The 20 firms identified as "majors" in the instructions to our report, hold 8.5 percent. Loans to refiners represent 7.6 percent of total oil and gas loans. The remainder is distributed among a collection of companies engaged in the distribution of energy products and other activities related to the oil and gas sector, that we grouped under "other."

Oil and Gas Loans of Reporting Banks
(September 30, 1985)

| Borrower | Amount Outstanding ($ billions) | Percent of Total Outstanding | Nonaccruing ($ billions) | Percent Nonaccruing In Category |
|---|---|---|---|---|
| Independent Producers | $14.6 | 36.8% | $1.0 | 6.9% |
| Drillers & Other Field Servicers | 6.4 | 16.1 | 1.0 | 15.6 |
| Major Oil Cos. | 3.4 | 8.5 | - | - |
| Refiners | 3.0 | 7.6 | 0.6 | 20.0 |
| Other | 12.3 | 31.0 | 0.5 | 4.0 |
| TOTAL | $39.7 | 100.0% | $3.1 | 7.8% |

We also have information from the banks on the quality of those loans. As shown in the table, at the end of last September slightly more than $3 billion, or 7.8 percent of total oil and gas loans, are reported as nonaccruing. By comparison, for all national banks, nonaccruals equal 3 percent for commercial and industrial loans. A loan generally is classified as nonaccruing when a borrower is not meeting or cannot be expected to meet all the repayment conditions of the underlying loan agreement.

Among the borrower categories, loans to refiners and to the oil services companies show the highest percentage of nonaccruing loans, 20 percent, and 15.6 percent, respectively. Comparable percentages for the independents and those in the other category are 6.9 and 4.0 percent, respectively. The majors show virtually no nonaccruing loans.

The special report also enables us to ascertain how those loans are distributed among national banks. For example, nine of our 12 multinational banks hold nearly 58 percent of reported total oil and gas loans, or $23.3 billion. Ninety percent of reported oil and gas loans are held by banks with assets in excess of $1 billion. In terms of location, 76 percent of the reporting banks are based in Kansas, Louisiana, Oklahoma or Texas, and hold 33 percent of the reported loans.

In assessing the effects of oil and gas lending, it is important not to lose sight of the fact that, for most of these banks, such loans are not the only loans in their portfolios, nor are they necessarily the most significant. Generally, banks reporting oil and gas loans hold diversified portfolios. As shown in the following table, among all reporting banks, oil and gas loans represent approximately 9.0 percent of all loans.

Total Loan Composition of Reporting Banks
(September 30, 1985)

| Loan Category | Amount Outstanding ($ billions) | Percent of Total |
|---|---|---|
| Commercial (Net of Oil & Gas) | $ 71.1 | 16.1% |
| Commercial Real Estate | 46.0 | 10.4 |
| Consumer | 44.0 | 10.0 |
| Oil & Gas | 39.8 | 9.0 |
| Residential Real Estate | 39.8 | 9.0 |
| Agriculture | 5.4 | 1.2 |
| Other Loans | 194.4 | 44.1 |
| TOTAL | $440.5 | 100.0% |

Additional insight can be provided by examining in somewhat greater detail the financial performance of the reporting banks. For this purpose, because of the great discrepancies among banks in terms of their size and the relative importance of oil and gas loans in their portfolios, it is best to look at median data. Median data are not as sensitive as average data to bias from the presence of extremely large and very small banks.

Among the reporting banks, median assets total $103 million and volatile liabilities (generally short-term uninsured deposits) fund approximately 22 percent of assets compared to 11 percent for all national banks. Earnings and capital at reporting banks are under some pressure. The median primary capital ratio at these banks is 8.0 percent, only slightly below the primary capital ratio of 8.7 percent for other national banks. The median return on assets (ROA) of reporting banks is 0.70 percent, compared to 1.01 percent for other national banks.

In part because of the effect on the Southwest economy of the downturn in the oil and gas industry, many of the banks with oil and gas loans are reporting increased problem credits in other loans. Those include loans to local real estate and to other industries linked to the oil and gas sector. As a result, the median nonaccrual rate on all loans at reporting banks is 2.9 percent, compared to only 0.8 percent for the median of other national banks. Moreover, approximately 18 percent of reporting banks are on the Comptroller's problem bank list, compared to 5 percent of other national banks.

Certain banks in the Southwest with oil and gas loans and loans to other sectors within the region face major earnings challenges in the years ahead. If oil prices should remain below $20 for an extended period of time, we would expect the quality of oil and gas loans to decrease, further reducing earnings and requiring additional loan-loss reserves. The situation, therefore, merits our continued vigilance and sensitivity.

## OCC POLICY REGARDING OIL AND GAS CREDIT PROBLEMS AT NATIONAL BANKS

Recovery of banks with substantial oil and gas loans depends on a period of increased financial stability within the oil and gas industry. In the interim, these banks, with the support and encouragement of their supervisors, are pursuing loan work-out plans in an effort to ease the financial pressures faced by their oil and gas borrowers.

Work-out strategies are a prudent banking practice when based on realistic projections of the borrower's ability to repay their debt. The Office is carefully reviewing bank practices and its own present policies and procedures regarding credit evaluations and loan restructurings. We wish to make certain that the environment is conducive for banks to restructure problem credits of borrowers with reasonable long-term prospects, provided such action is consistent with safe and sound banking practices. This will benefit both banks and their borrowers. We are optimistic that the vast majority of these banks possess the resources, management talent and willingness to work with their borrowers, and we believe that our efforts are best directed toward finding ways to strengthen and assist them during this difficult period.

## CONCLUSION

In conclusion, I would like to reiterate the comments made by the Comptroller of the Currency on March 11, 1986 before the Senate Banking Committee regarding the need for fundamental changes to our banking statutes. If we are to avoid future problems caused by banks with significant loan concentrations, it is critical to make changes that address the fundamental problems of inadequate opportunities for banks to achieve sufficient asset diversification. Changes that will help meet those objectives include relaxation of product and geographic restrictions. Only then will banks be better able to withstand future downturns in energy or any other sector.

**The Chairman.** How serious do you regard a 7- or 8-percent nonperforming status on loans, Mr. Fiechter?

**Mr. Fiechter.** I think particularly when compared to the nonaccrual rate on other loans held by banks, we view this as very serious. As I noted, fortunately, for most of these banks, oil and gas does not represent the dominant asset on their banks. They are better diversified. Therefore, from a systemic standpoint, I am not certain that we have the same concern for the system as a whole, but for individual banks, there is a great deal of concern.

**The Chairman.** Mr. Shumway.

**Mr. Shumway.** I would agree with that. The percentages are very high, but when put in the context of the proportion of energy loans in some of these banks, it is not quite so disturbing.

**The Chairman.** Much has been said and reported about the plight of banks with agricultural loans, and I note you start out by drawing a parallel. How many of the banks that are involved also have a larger exposure in agricultural loans? Mr. Shumway.

**Mr. Shumway.** We don't have any statistics as to the number of banks who are exposed both in agriculture and energy. There are some, of course, but we have no statistics at this time.

**The Chairman.** Mr. Fiechter.

**Mr. Fiechter.** I don't have statistics with me, but I know that in certain States—Kansas is one, Oklahoma—you definitely do have that problem of, not only do the banks have oil and gas loans, but their agricultural borrowers are also having a lot of difficulty.

**The Chairman.** That could pyramid their problem.

**Mr. Fiechter.** It certainly would.

**The Chairman.** And if a 6- or 7-percent rate is bad in one, and you have a similar bad condition in another category of loans, in those banks, it might create a larger problem than it would if either was independent of the other.

**Mr. Fiechter.** Most definitely.

**Mr. Shumway.** That is right.

**The Chairman.** Are those statistics available at all?

**Mr. Fiechter.** We would—I don't know that the other agencies would, but as a result of the survey that the OCC has undertaken, we could give you statistics on the number of——

**The Chairman.** I do not want you to go out and create an entire new bureaucracy just to answer this question, but if you could do that with too much additional labor, I would appreciate that.

**Mr. Fiechter.** We can do that.

**The Chairman.** Mr. Shumway.

**Mr. Shumway.** We can try and do that. We have statistics on the agricultural banks, and we can try and combine that with what we obtain from our energy survey and see what we can do.

**The Chairman.** They are not precisely the same; the forms are different?

**Mr. Shumway.** Somewhat, yes.

**The Chairman.** And there may be some, or perhaps no relevance between the two. Do you have any feeling from your own analysis as to how long this price crisis is going to remain in energy? Mr. Shumway.

**Mr. Shumway.** In the energy industry? No; because part of it has happened real recently; the real precipitous drop in oil prices has happened so recently, and the price is so volatile now, it is very difficult to know what the effects, first of all, of the last drop are going to be, and then from then on, how long they will last. I think it is very difficult to say.

We know that banks in the Southwest, particularly, were having problems even before this last decline, and as I mentioned in my testimony, the rate of bank failures in the area has been higher than the Nation as a whole for several years. So we have to assume that this last drop is going to exacerbate the situation.

The **CHAIRMAN**. Mr. Fiechter.

Mr. **FIECHTER**. No. We don't have any independent analysis.

The **CHAIRMAN**. Do you have any independent analysis or the access to figures which would indicate whether or not Saudi Arabia changed their investment portfolio in this country immediately before they took this action?

Mr. **FIECHTER**. I don't.

Mr. **SHUMWAY**. We don't.

The **CHAIRMAN**. Is there any way to find out? Is that data available?

Mr. **FIECHTER**. Not through our agency.

Mr. **SHUMWAY**. This would be largely in the large banks, and probably in the trust departments, I suppose. But I am not sure that that data is available.

Mr. **FIECHTER**. It would be, I would imagine, through the Treasury Department, the foreign assets. I believe there is an office that does look at this, but it is not part of either of our banking agencies.

The **CHAIRMAN**. Aside from the legislation that has been proposed, have you thought about other mechanisms that might be useful to meet the problem, should there be a pattern of failure develop?

Mr. **SHUMWAY**. Well, the agencies are working on some initiatives right now in the agriculture area that also might well be extended into the energy area. They don't have so much to do with what will happen if there are failures. They are more involved with trying to prevent failures. These, I think, are focused primarily on the issue of capital forbearance, where a well operated bank, for example, might be allowed to run its capital ratio down below what we consider to be our required minimums with the provision that they would be able to give us a plan that would allow them to go back up over a period of time; that sort of thing.

The **CHAIRMAN**. If a bank gets into trouble, for whatever reason, that bank's failure is not an isolated incident. It does not just affect its own shareholders and depositors; is that not correct?

Mr. **SHUMWAY**. That is right. It can have a destabilizing effect on other aspects of the industry.

The **CHAIRMAN**. One of the first things you would do, as you see a bank begin to have too much dependence upon nonperforming loans, is require an increase in bad debt reserves; would you not?

Mr. **SHUMWAY**. Certainly.

The **CHAIRMAN**. Is that true, Mr. Fiechter?

Mr. **FIECHTER**. Yes.

The **CHAIRMAN**. If you run into that situation, then they have to change their own lending and borrowing practices to accommodate that new reserve requirement, which means that they become themselves less lenders and more borrowers. Is that not correct?

Mr. SHUMWAY. They would have to adjust their lending policies as a result of the conditions that caused the losses.

The CHAIRMAN. They would have less capital; they would be in the capital markets themselves.

Mr. SHUMWAY. They might be in the capital market if they thought they could sell more capital, but that may not be too easy.

The CHAIRMAN. Mr. Fiechter.

Mr. FIECHTER. I was just going to say that to the extent that they were adding to their loan reserves, that wouldn't necessarily lessen their ability to go out and make an additional loan. To the extent that there was a good borrower with good prospects—the amount of money, their lending limit, which is based on primary capital, which would include the loan loss reserve, it wouldn't necessarily force the bank to retract. It would certainly have an effect on the bank's reported income. But merely adding to reserves, in and of itself, doesn't necessarily cut back on the bank's ability to have additional lending.

The CHAIRMAN. Have either of you tried to make a determination of the severity of the problem if, or related to the amount of—the time at which energy prices would turn around? I guess what I am really getting at is, everyone expects that at some time in the future, energy prices will begin to rise again. But we do not know whether that is months from now, or 6 months from now, or 2 years from now.

Obviously, the exposure is an exposure of degree as well as of time. You can accommodate a severe exposure for a short period of time that you couldn't accommodate for longer periods of time. Have either of you been able to make estimates of how soon do you think a turnaround will come?

Mr. FIECHTER. If your question is when do we think oil prices will start back up; no. I would imagine your staff has a lot more expertise than we would on that.

The CHAIRMAN. I would hate to think that is true, although I have a great deal of respect for my staff.

Mr. FIECHTER. Our approach in looking at this problem is to take more of a worse-case scenario; that in judging the adequacy of a bank's reserves and their treatment, their lending policies, we have to assume the things will not improve and it is on that basis that we work with the banks.

Obviously, today it is extremely difficult in evaluating reserves, to put a price on that because it depends on what day you are looking at it.

The CHAIRMAN. In order to determine whether a loan is performing well or not, you look at the ability of that borrower to pay interest and capital repayment.

Mr. FIECHTER. And what the prospects are.

The CHAIRMAN. And what the prospects are, and that prospect has to be determined upon your estimate of oil price, does it not?

Mr. FIECHTER. It does, but clearly we are having to do that right now on very much of a case-by-case basis.

The CHAIRMAN. What is that case-by-case basis when it comes to the price of oil?

Mr. FIECHTER. I am not an examiner down in the Southwest, but it probably depends on what type of oil you are talking about, what the sulfur content is.

The CHAIRMAN. Are you looking at oil prices staying where they are, and if so, how long?

Mr. FIECHTER. I would imagine that what we are doing is probably looking at prices above where they are as of today, because I personally wouldn't think it would make a lot of sense to assume that the $12, or whatever price was quoted today, will be the price for the next 5 years.

The CHAIRMAN. How about for the next year?

Mr. FIECHTER. I think even there, there is so much uncertainty in the market, that any figure that I gave you off the top of my head—probably if you had a hearing 1 week from now, we would have a different figure.

The CHAIRMAN. I am sure that is true, but it is as good as the rest we are getting. Mr. Shumway.

Mr. SHUMWAY. I think John was right when he said we have to adopt a conservative approach. We have to basically assume that things are not going to be too much different than they are now, unless there is overwhelming evidence that oil prices are going to go up.

The CHAIRMAN. All right. Mr. Fiechter, you said kind of a worst-case analysis, but you haven't assumed a worse case at all, have you?

Mr. FIECHTER. A few months ago we assumed a worst-case analysis, that the spot price would go to $20.

The CHAIRMAN. So much for a few months ago. How about today?

Mr FIECHTER. We are going to the banks, asking the banks what the effect would be of—I think it is in the range of $15 to $18 a barrel.

The CHAIRMAN. Have you asked them what it would be if it were $10 to $12 a barrel?

Mr. FIECHTER. Some of the banks are doing that analysis internally. I don't believe that we have formally gone out and asked for $10, but as I said, we are constantly having to revise.

The CHAIRMAN. How often do you revise? You say, constantly. Every time you look at a loan, you make a new evaluation?

Mr. FIECHTER. No; in terms of our going out and it is relatively resource intensive for us to go out to any large sample of banks and ask what would be the effects on your independent producers at $20 or $15. Our most recent analysis, which was just calling banks, the major producers; we asked for a $20 price and a $15 price, and that was 3 or 4 weeks ago.

The CHAIRMAN. Mr. Shumway.

Mr. SHUMWAY. I would agree with that. The only thing I would add is that any time an examination is underway in a bank, the examiner attempts to make his appraisal of the collectibility of the loan on the market as it exists at that time. And what John is talking about is a survey encompassing lots of banks.

The CHAIRMAN. I know that I am asking you things that you cannot answer and I do not know that anyone really can answer, but you are making judgments, collectively, based upon something.

Now, I do not suppose you all drink tea, or read tea leaves, although that is probably as accurate as any other right now. But you have to make some judgments and you are. I am not trying to press you to expose how uncertain those judgments are, except from the standpoint that in acquiring information, this committee has to try to find the best information we can get.

You are out there dealing with financial institutions that are dealing in the energy world. You are making real decisions daily, just as they make real decisions daily. And they base it on something, and you base it on something. That is really what I am trying to get at; what is that something on which you base your decisions? How do you judge the something on which they base their decisions?

Some of those loans I suspect were made by entrepreneurs that were confidently expecting $70, $80, $90 barrel oil. That obviously is way out of the ballpark for the near term. That near term is probably measured in the next 10 years, anyhow.

I am not sure how certain I would want to be to go much beyond that, but what is real for the next 6 months, over the next 18 months?

Mr. **Fiechter**. Well, I may be sticking my neck out, but based on the discussions that I have been a party to, I think during the last few months, before the drop that has occurred in the last 12 weeks—the notion was in the $20 range, because I think that we all agreed that the $35, $40, $45, the projections didn't make any sense.

I think though that we are concerned that we not let the pendulum swing back too far in the other direction; that it would be a mistake to go in and start requiring banks to charge off loans at a $12 or $10 price. There is so much flux out there.

The **Chairman**. It is somewhere at $20 or below, but not as much as $12.

Mr. **Fiechter**. Not today $12, because to go through, require that chargeoff, particularly where a borrower has fairly good prospects, the bank has good capital, I think that we would probably revisit that bank in a few months and if it looks like $12 or $10 really is the right figure, we would go back in and revalue those credits. But I don't think that we want to kneejerk—say, if $20 was wrong, let's try $10 or $5 and see how it is——

The **Chairman**. Mr. Shumway.

Mr. **Shumway**. I can't add to that.

The **Chairman**. Can you subtract from it?

Mr. **Shumway**. Not really. We certainly don't have any expertise that you don't have available to you. We rely on the information we have available and then try to make a reasonable judgment.

The **Chairman**. If I get the picture correctly from you gentlemen, it is a cautious movement downward from $20, in your view; not dramatic and, at least, in the near term, not radically different from that which was the prospect up until 3 months ago. Which would tell me that you really believe that this current precipitous drop is a temporary aberration in the market. Am I correct?

Mr. **Fiechter**. We are monitoring it closely.

The **Chairman**. Well, if you did not believe it was temporary, you would be doing more than that; would you not?

Mr. **Fiechter**. OK. I would agree that we have not made the decision in our office that if the spot is $12, that $12 is going to be the long-term price. We have not reached that decision.

The **Chairman**. Mr. Shumway.

Mr. **Shumway**. Part of our problem is that in dealing with banks, we have tremendous power over—life and death power over those banks, and were we to make a judgment that oil is at $12 and it is not going to go above $12, and based all of our classification of loans on that judgment, this could have very serious effects on the bank. So we tend to be as cautious as we can and still be prudent.

The **Chairman**. So your current estimates, expressed in your testimony today, are cautious estimates, and if indeed the situation was worse, then, indeed, the picture should be painted in much darker tones.

Mr. **Shumway**. I think that is a fair statement.

The **Chairman**. All right. Gentlemen, thank you, very much. We will have some further questions to submit for response in writing to the record. Thank you, very much, for your patience and your testimony here today.

The committee stands adjourned.

[Whereupon, at 1 p.m., the hearing was adjourned.]

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# APPENDIX

## Additional Material Submitted for the Record

Statement of

DR. ELIHU BERGMAN, EXECUTIVE DIRECTOR
AMERICANS FOR ENERGY INDEPENDENCE
Washington, D.C.

Submitted to
Senate Committee on Energy and Natural Resources

March 20, 1986

Thank you Mr. Chairman for the opportunity to present our views on the proposals for a tax on imported oil and products.

Americans For Energy Independence is an organization, based in Washington, that performs educational work in the energy policy sector. We identify issues that involve the role of energy in the economic health and national security of the country, and promote informed discussion of them. In doing so, we represent no particular interest. We enjoy the luxury of applying a single yardstick in selecting and measuring issues: Is it good for the country?

In doing so, we do not propose to assess the potential of the various formulations of either the oil import tax or gasoline tax proposals. That is for you to do. We have taken the position for several years that some form of levy on imported oil would enhance the energy security of the country. That is still where we are coming from today, and with even greater urgency.

We recognize that the oil import tax is in the spotlight today as an instrument for deficit reduction and revenue enhancement; not energy security. Whatever potential it has for those urgent objectives, we view the oil import tax as an issue of energy policy, and will discuss it from that perspective.

That urgency is being obscured in the euphoric afterglow of the oil price collapse, and the anticipation of the good economic news that will come in its wake. There is general agreement that the economic vital signs will improve at a faster rate in this country--except for its oil producing regions--and for the world as a whole--except for the oil producing countries. This profile of economic good health includes higher economic growth rates; lower interest rates; lower rates of inflation; and higher rates of employment. It is a tempting vision that compensates for the economic pain and frustrations of the past decade when whopping oil price increases determined by others savaged our economy. And we are told there is more good economic news to come, as oil prices continue to decline, or even if they remain at current levels--provided public policymaking does not interfere with the natural economic processes.

Unfortunately this is a short-sighted version of the reality. The oil outlook for the United States is not encouraging; oil remains the weak link in our energy system--despite the lower prices and our reduced levels of consumption and imports. And if we fail now to employ public policy to compensate for market signals that tell us to buy more cheap oil, we would forfeit our energy gains of the past decade, our present market advantage, and the opportunity once-and-for-all to become masters of our energy future.

Here are some of the components of our continuing vulnerability:

On the supply side:

There have been no major new oil discoveries in the United States since Prudhoe Bay, despite costly efforts by major oil companies to find more oil.

In 1985 there were two projections of future U.S. production by the Department of Interior's Geological Survey and the Congressional Research Service--both respected sources--that forecast a decline of as much as 50% in the 1990s. At current rates of U.S. oil consumption, even if they do not rise, this decline would require an offset of imported oil in the range of 4 million barrels a day.

There have been no major oil finds capable of production in the early 1990s outside of the countries that now have proven oil reserves. More than half of the world's proven reserves--oil that can be pumped out of the ground now--are on the Persian Gulf, held by OPEC countries.

On the demand side:

Nobody really knows how much lower oil prices will restore oil's popularity. We can assume that the equipment designed to use oil more efficiently, and to replace it, in the industrial, transportation, and household systems will not be abandoned. And the economists tell us that oil is not a wholly elastic commodity. Still, lower oil prices will create some additional demand.

Here in the United States there is a potential to restore the use of an additional 3 million barrels of oil a day. There is an estimated equivalent of about 1 million barrels of dual-use capacity in the industrial sector; plants that have facilities that can switch from natural gas to oil by flicking a switch.

In addition, there is about 2 million barrels a day in electric generating capacity that has been retired over the past ten years by the new nuclear and coal electricity plants. With electricity demand rising, and little evidence of new nuclear and coal plant orders to meet it, the easiest recource for utility companies is to restart the retired oil plants, and at a short-term bargain.

This is the supply/demand potential of the United States alone--the loss of the 4 million barrels a day in supply; and the potential for a pickup of another 3 million barrels a day in demand. There is the rest of the world to consider. The industrial countries have made substantial gains in efficiencies and substitutions for oil; but lower prices could add to their oil demand. And while oil consumption in the industrial countries has declined during the past 10 years, it has been increasing in the Communist and Less Developed Countries. Given their lack of alternatives, and population pressures, this group of countries could add pressure to the available supply of oil in the world. And again, there is only one sure supplier of last resort.

The United States has reached another crossroads in national energy policy. The choices we make now in response to a glutted oil market and falling prices will be critical determinants of our future energy and economic security. We can respond to market signals, buy cheap oil, and enjoy all at once the improvement it creates in our economic vital signs. We can squander the advantage now. Or we can choose to conserve and preserve the advantage; to stretch it out; to make it a permanent fixture; by resisting the temptation for instant gratification. It is like the winner of a lottery spending it all now, or investing the windfall for the future. And it is abundantly clear that this streak of good fortune we now have won will fade away in the 90s if we fail to conserve and protect it.

With these real and dangerous prospects ahead, the national interest requires a set of energy policies focused on the continuing reduction of oil consumption. To reduce our vulnerability to insecure foreign sources of supply and price manipulation by unfriendly foreign producers, the United States needs to create a ceiling on our oil consumption that will prevent an increase in imports. With the real prospect of declining domestic production, this target requires policies that raise the cost of oil consumption to discourage its use and to maintain the value of substitutes for it. Regrettably, this goal cannot now be achieved by allowing the fine invisible hand of the marketplace to work its will; the fine invisible hand tilts toward more, not less, oil consumption.

To compensate for these wrong and dangerous marketplace signals, we need public policy to tilt the balance. A tax and tariff on imported oil and oil products; an adjustment in domestic taxes to capture any windfalls that might result from increasing the price of oil that originates abroad; an increase in the tax on gasoline; and the provision of tax incentives to restore domestic oil production are all measures we should consider. None of these actions will win political popularity contests; they will be tough to sell and digest. But they represent a partial premium payment on an insurance policy that could provide national energy security. And we must take out the policy now; before it is once again too late.

Thank you for the opportunity to express our views.

# BEYOND THE OIL PRICE COLLAPSE OF 1986

BY

ELIHU BERGMAN, PH.D.

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MARCH 13, 1986

# BEYOND THE OIL PRICE COLLAPSE OF 1986

by Elihu Bergman, Ph.D.

The rapid and deep collapse of oil prices in the winter of 1986 intensifies a reversal of economic fortunes among the major oil-producing and consuming countries of the world. The lineup of winners and losers reverses the pattern that followed the first oil price shock of 1973-74. But like the experience following 1973, the advantage is likely to be temporary, and revert once again, unless this year's set of winners act wisely and deliberately to preserve it for themselves.

The price collapse once again confounded the experts; it was not supposed to happen till Spring, when the returns from the North American and European winters were in; and in any case, the price floor was not supposed to fall out. During 1985, government agencies in consuming and producing countries; banks; oil companies; and research institutions all forecast a continuation of the oil price decline, and an inability of the producing countries in and out of OPEC to do anything to prevent it. Most projected oil at $23.00 a barrel by the end of 1986; some of the venturesome said the price could drop as low as $20.00. And both producing governments and private lending institutions built this conservative price estimate into their respective budget estimates and banking transactions.

But it appeared that nobody had fully accounted for the fragile condition of the world oil market; when the price penetrated the $20 threshold in January they were amazed; and when it went below $15 in February they were "shell-shocked" (as one of the prominent U.S. analysts confessed.) Where it would end, nobody was willing to say for sure (admitted another highly respected U.S. analyst.)

This latest combination of promising and painful experiences prompts some reflection on how it all came to pass, what the next episode might be, and in any case, what we might learn from it all. It is only 12 years since energy -- and oil -- was catapulted into the world's consciousness by the threat -- not reality -- of an embargo by some of the producing countries, and the very real price spirals that followed.

For the modern industrial nations who are the world's major oil consumers the aftermath brought some panic, great anguish, and considerable economic and political distress. For the producing nations there were brief moments in the sun of economic power, irresistable temptations to push their sudden economic good fortune, with a resulting mixture of opportunities and disappointments, and for some, disasters whose consequences are intensified by the 1986 price collapse.

For the economists and bankers, there was a landscape littered with mistaken forecasts and wrong guesses, the latest being their estimates of 1986 prices. Their projections of oil at $50 a barrel in 1985 are a painful legacy. For everybody, the shocks of 1973-74 and shockwaves of 1979-80 shattered our energy innocence and indifference.

Now in the novel environment of collapsing prices in the spring of 1986, we all should be somewhat the wiser. The question is how well we will be able to use the experience of the past 12 years to our respective advantage, exporter or importer. Who, if anybody, will win when it is all over? Or are there any winners in this encounter?

Developments in the world oil market over the next 12 years will be the major determinants of winners and losers, if there are to be any. And the oil requirements of the modern industrial countries who consume about 75% of the world's oil will continue to be the major factor in the world oil market. Their skill and will in managing their energy systems will be the principal determinant of oil demand and prices. At the same time, the requirements of the Communist and Less Developed Countries will play an increasingly important role in the market. Meanwhile, the only certainty is that in 1996 the world oil scene will look different than in 1986.

The process that brought us to the free-falling 1986 oil market became visible after the second oil price shock in 1980-81 finally turned around world oil demand. After surging from a post World War II takeoff point of 10 million barrels a day (MBD) in 1950 to a historic peak of 62 MBD in 1979, an increase of 520%, the turnaround in world oil demand that started in 1980 declined to 53 MBD in 1983. During 1984 demand started creeping up again, but by a factor less than 1%.

Contrary to the hopeful expectations of the producing countries, and the logical projections of many experts, the cold winter of 1985, the continuing economic growth in the U.S. and the beginnings of economic recovery in Western Europe did not produce a pickup in oil demand last year. To the surprise of all concerned demand continued to fall. By the summer of 1985, world requirements for OPEC oil had fallen below OPEC's self-imposed 16 MBD production ceiling; the individual OPEC members were breaking discipline to sell more than their individual quotas at discounts in the eroding market; and major non-OPEC producers such as the Soviet Union, Mexico; and Britain were cutting prices and hustling for customers.

At its meeting in Geneva in December 1985, OPEC formally acknowledged its failure to withstand the pressures created by more suppliers fiercely competing for shares of a declining market. It was now officially "every man for himself" as the producing countries abandoned their 12 year old offensive market strategy through which they set prices by manipulating marginal production. In its place, OPEC announced a defensive strategy, which was designed to carve out and defend a share of the world oil market. Subsequent efforts to define this "market share" let alone agree on its distribution among OPEC members have not been successful.

Two major developments during 1985 removed the final props to OPEC's cohesion and ability to function as an organization capable of collective action: One was the decision of the British government to abandon the support of OPEC pricing; and the second was the decision of the Saudi regime to abandon its long-term role as OPEC's "swing" producer, and to go it alone.

In March the British government eliminated the market role of the British National Oil Corporation (BNOC) which cost the British Treasury $76 million for the previous 8 months, and an estimated $11-22 million for March alone. Until the government acted, BNOC took 51% of U.K. production for resale at an established OPEC price. Clearly there have been no buyers at this price in 1985, so BNOC was forced into the dominant open market to sell the oil at a loss, and the government picked up the difference. Beyond the cost to a fragile British economy, the arrangement had become a serious political liability to the Thatcher Government, which is committed to "privatizing" the economy.

The British action removed the last external prop to the official OPEC pricing structure. In June Britain initiated another round of price cutting. The British action, along with the abandonment of OPEC pricing by Norway and Mexico, demonstrated that OPEC as a cohesive institution has lapsed into irrelevance. In 1985 OPEC production was down by nearly 50% from its 1979 peak; OPEC had conclusively lost the pricing initiative, and OPEC members on their own were functioning as suppliers of last resort.

During the summer of 1985, the market for OPEC oil dropped below the reduced OPEC production ceiling of 16 MBD. Even the Saudi production cutback to an unprecedented low of 2.5 MBD failed to restore OPEC's market claim.

OPEC's reduced 16 MBD production ceiling, and even the original 17.5 MBD level distributed among individual members is not adequate to meet their individual oil revenue requirements. Collectively the members of OPEC need to sell approximately 22 MBD to maintain an adequate cash flow for their individual economies.

The individual revenue needs, and their intensity, differ among the members, and it is this diversity in a period of a surplus or glutted market that has exposed the internal contradictions and conflicts within OPEC. So long as the world needed more oil from OPEC than OPEC needed to sell (the 1973-81 period) the built-in conflict was irrelevant, and OPEC could present the image of unity, cohesion, and strength. But when the market turned after 1981 to a condition where the world needed less OPEC oil than OPEC needed to sell, the papered-over clashes surfaced, and OPEC entered the period of internal upheaval in which it now exists, and which is vividly exposed to public view every time OPEC meets.

The clash built into OPEC reflects the sharply divergent financial requirements and assessments of economic advantage that separate the low population "cash rich" members from the high population "cash poor" members.

It is essentially a conflict of interest between Saudi Arabia, Kuwait, and the United Arab Emirates against all the rest.

On the basis of numbers alone, low population countries enjoy the balance of power within OPEC. With 3.8% of OPEC's population, they control 60% of OPEC's proven reserves, and 40% of total world reserves. Exempt from population pressure, and with an enormous oil reserve in the ground, these countries can afford to take a long view, which involves limited and discretionary oil production. Their discretionary position provides them a weapon to enforce discipline within OPEC, simply by temporarily raising production and flooding the market. But the effectiveness of this weapon is limited by the condition of the world market, and the limitation is visible today in a highly competitive buyer's market in which temporary "flooding" by Saudi Arabia only intensifies the competition; it has not disciplined the delinquent OPEC members.

Though exempt from the population pressures and desperate financial requirements, the discretionary producers are afflicted with another set of pressures that limit their discretion and influence. All have conducted major economic development programs financed by the enormous capital influx of the 70's, which in turn have created expectations among their populations. These expectations are not suddenly turned off, particularly among populations that are subject to unrest and instability created by the increasing presence and influence of Islamic fundamentalism in the area.

Thus the discretionary producers -- notably Saudi Arabia -- must maintain a level of expenditure that is both responsive to the expectations and to budgetary realities. For the Saudis, these factors impose a lower limit on their discretionary oil production -- they need to produce about 4 MBD to meet their requirements -- and the need for deficit financing, something they have never done before. At their 1981 peak, Saudi oil revenues were $102 billion; government expenditures that year were $81 billion; and savings or cash reserves amounted to $100 billion. By 1984, Saudi oil revenues were down by nearly 60% to $42 billion, while expenditures could be cut only by 22% to $63 million. By self-imposed legislation, the Saudi regime does not permit deficit financing. Still in 1984, there was an estimated $10 billion drawdown in Saudi reserves, followed by another in 1985. At that rate of deficit financing, and with a continuation of the prevailing world oil market, even the enormous Saudi reserves could be wiped out.

It was this dual threat to Saudi resources -- oil and financial -- that prompted a definitive turnaround in Saudi oil policy during the summer of 1985 and triggered the price collapse in January. The shift was expressed in a decision by the Saudi regime to increase production -- double it from the all-time summer low level -- and thereby drive down prices to a level that would guarantee both a competitive position for oil against substitutes over the long run, and meet Saudi financial requirments, also over a long term. In this decision, the Saudi regime turned inward to focus on internal political and economic requirements at the expense of OPEC loyalties and inflated pretentions to regional and global influence. It was a choice to "go it alone" because the international ties and ambitions were becoming a liability to Saudi economic and political stability.

Though the total breakdown in OPEC discipline during 1985 provided the opportunity to implement it, the Saudi decision had been in-the-making for a long time, since the first surge in prices in 1973-74. It emerged from a clash of two distinctive positions within the Saudi regime: One, more aggressive and interventionist, saw the Saudi oil resource not only as a channel to internal modernization, but to a more influential regional and global role; Saudi oil capabilities should be manipulated to serve these objectives. The second position, more traditional and isolationist, and less inclined to play for high stakes on the international scene, favored the preservation of the value of Saudi oil over the long run by using it in moderation, and to maintain its long-term attractiveness in the marketplace. This second position, advanced by some of the more traditional elements in the Saudi royal family, prevailed and was activated in the summer of 1985.

In taking it, the Saudis abandoned the other OPEC members to their own devices, and whatever their rhetoric about the irresponsibility of non-OPEC producers, they are not centrally concerned with Britain, Mexico, and the other offenders within OPEC. The objective is simply to price oil over the long term at a level designed to discourage the further erosion of world demand by the continuing substitution of alternatives to oil in the major consuming countries. The Saudi regime wants the demand for oil stabilized, preferably above current levels.

The reversal in Saudi strategy, and their unwillingness to continue balancing the diversities within OPEC, sets back any early prospect for a restoration of OPEC's influential role in the world oil market. Because to turn around their fortunes, not only do the OPEC countries have to accomodate their own diversities and built-in clashes, but they need to accomodate to the increasingly important position of non-OPEC producers in the marketplace, and the preferences for them as sources of supply by the importing countries. Since the 1979 peak, the pattern of world oil production, and the distribution of suppliers, has shifted dramatically.

By 1983, when world consumption bottomed-out, OPEC production was down by 44%; and between then and 1985 by another 10.4%, for a total decline of more than 50%. During the same intervals total non-OPEC production increased by 12.6% between 1979-83, and another 4.2% between 1983-85, for a total of nearly 17%, or 5.5 MBD of new production added to a soft market. Within the non-OPEC grouping, their were dramatic production increases in Mexico -- 80%; Norway -- 75%; and the U.K. -- 56%. Despite a slight production decline in 1985, the world's largest producer, the Soviet Union, increased production by 8.8%, and emerged as a very aggressive competitor for the declining Western European market as it raised exports to the West by 50%.

As the new sources of supply became available, they provided a broader range of choices for the importing countries, and created some notable shifts in import patterns. Most important was the change in U.S. import sources. In

1979, the top three foreign suppliers to the U.S. were Saudi Arabia; Libya; and Nigeria. By 1984, they were replaced by Mexico; Canada; and the U.K.

The turnaround in energy consumption patterns of the non-Communist industrial countries triggered by the two oil price shocks of the 70's are the major cause of this year's price collapse. These patterns involve a significant decline in oil use in the energy systems of countries that collectively use 60% of the world oil supply. (This U.S. alone, as the world's largest user, consumes 25%.) Major permanent reductions in oil consumption were achieved by a combination of efficiencies and conservation in energy usage and by substituting alternatives for oil.

Between 1973-83, when their post "crisis" oil consumption bottomed-out, the OECD countries as a group reduced oil consumption by nearly 20%. Between 1983-85, their oil demand grew by less than 1%. During the 1973-83 period the U.S. alone was down by 14%; and in the 1979-83 interval after the second oil price shock, U.S. consumption declined by nearly 20%. Other OECD members achieved even steeper reductions in the 1973-83 period: Canada was down by 29%; Germany 27%; France (a non-OECD member) 28%; and the U.K. 35%. While the reduced economic activity created by recession was a major factor in the 1979-83 declines, the changing energy consumption patterns continued to be influential.

The role of the efficiency/conservation factor in creating these declines is illustrated by the U.S. experience. Between 1973-84 the average fuel efficiency (mileage achieved per gallon of gasoline) of passenger automobiles in the U.S. rose by 25%. During the same period, the U.S. economy was increasing in productivity per unit of energy input by a factor of 22%.

The substitution of alternative resources for oil was accelerated since 1973. Electricity generation, which increased in most of the countries, provides a vivid example of the substitution process. Nuclear energy and coal were employed as the major alternatives, with nuclear production in the U.S. up by 250%; in Japan 400%; Canada 100%; Germany 100%; and France 500%. Coal consumption in the U.S. increased by 50% and in Canada by 67%.

As the result of nuclear and coal substitutes, the U.S. was able to reduce oil consumption for electricity by nearly 70%, from a peak of 1.4 MBD in 1979, to less than 0.5 MBD in 1985. Other countries, notably France and Japan, achieved comparable reductions.

Though natural gas use declined in the U.S. in the 1973-83 period, it became an increasingly important factor in the Western European and Japanese energy systems. Gas consumption increased in Japan by 400%; Germany 33%; France 33%; Italy 67%; and the U.K. 80%. The Western European shift to greater natural gas usage was a result of the expanded production nearby in the Netherlands and North Sea, plus the availability of Algerian natural gas. In addition, in the early 80's the Soviet Union entered the Western European market with its expanded Siberian production.

As the United States and its industrial allies enjoy the prospect of improved economic vital signs brought on by lower oil prices, they should ponder whether the same conditions that subdued prices will continue, or will the lower prices create another turnaround. It is possible that beyond 1990 the world oil outlook could change substantially, with the present good fortune of the major oil consuming countries reverting to an advantage for the oil producing countries -- a replay of the 70's -- with a resumption of the upward spiral in oil prices.

Changes in conditions of both supply and demand would contribute to this turnaround. Foremost among them is the prospective decline in U.S. domestic oil production.

During 1985 two authoritative U.S. government sources published forecasts of a potential 50% decrease in domestic oil production by the end of the century. The Interior Department's Geological Survey forecast a production drop of more than 50% in Alaska, which had been viewed as the last major U.S. oil frontier. If there were to be any more "elephant" oil fields discovered in the U.S., they would be found in Alaska. But Alaska becomes an oil disappointment in Interior's new projections, with a decline of more than 70% in the most currently productive region of the U.S. The new North Slopes in Alaska have not been found, and prospects for their discovery are fading.

The Congressional Research Service, another highly respected source of oil forecasting, projected a 30% decline in domestic U.S. production levels by the year 2000. Other government, industry, and think tank sources in the U.S. agree with the CRS and Interior, if not on exact levels, on the declining production trends and their magnitude.

Even assuming only moderate increases above current U.S. oil demand in response to bargain prices and moderate economic growth, the losses in domestic production would translate into significant requirements for imports to offset the shortfall. A cut of 50% in the approximate 8 MBD of domestic U.S. production would double current U.S. import levels. The new requirement for foreign oil would restore U.S. imports to their 1979 peak. And with the ceiling on Mexican exports to the U.S. coupled to prospects for flat Canadian production, the U.S. most likely would have to turn to the Persian Gulf for its increased import requirements.

On the demand side, lower oil prices could restore as much as 3 MBD in the U.S. alone. This potential requirement is composed of dual-use industrial facilities, and retired oil-fired electric generating capacity. There is an estimated 1-2 MBD of dual-use capacity in the industrial sector -- boilers that can switch from natural gas to oil by merely turning a lever. In addition there is about 2 MBD in electricity generating capacity that has been retired during the past 12 years by new nuclear and coal plants entering the system. With increasing U.S. electricity demand creating the need for new capacity -- on the basis of a modest annual growth rate of 2.5% the Congressional Office of Technology Assessment reports that the U.S. will require a minimum 50% addition to current capacity by 2000 -- and a reluctance to order new nuclear and coal plants to meet it, the easiest recourse of utility companies is to restart the retired oil plants, and at a short term bargain.

Already there is evidence of increasing oil demand in a sector where it is essential. Oil consumption for transportation, which accounts for more than 60% of U.S. petroleum usage, and is not subject to substitution, has resumed its growth after bottoming in 1982. U.S. oil use for transportation peaked in 1978, and then declined 8.0% by 1982. Between 1982 and 1985, petroleum demand for transportation is up by 5.4%. There is no evidence that this upward trend will reverse.

By combining the potential domestic supply shortfall and demand increase, the U.S. alone could account for an increased oil requirement as high as 7 MBD by the year 2000. Even by cutting this potential requirement in half, the U.S. alone still have the potential to add significant pressure to available world oil supplies.

The other major oil consuming nations, experiencing rates of economic growth comparable to the U.S., could be expected to add to world oil demand in the 90's. If they experience comparable rates of growth in oil demand, these countries could account for another 1-1.5 MBD.

Even with more diversified energy systems, the developed countries in healthy economic conditions will be a factor in increasing world oil demand in the 90's. But the more significant pressures in restoring higher levels of demand could originate in the Communist and Less Developed Countries.

While oil consumption declined by 20% in the OECD countries between 1973-83, when it bottomed-out, it grew substantially in the Less Developed and Communist countries. In the same period oil demand in the Less Developed world increased by 46%. Demand in the oil producing LDCs -- OPEC members -- grew by 106%.

The Communist countries experienced similar growth, with a rise of 53% between 1973-83. Among them China alone increased oil consumption by 57%. Together, the LDCs and China comprise 75% of the world's population, and still growing at rapid rates. As of 1983 they accounted for 23% of the world's oil consumption.

Though rates declined in the 1979-83 period, with the exception of China actual consumption continued to grow in the Communist and Less Developed countries. With the combination of pressures -- population, political, and economic -- for higher energy usage in all these countries, it would be realistic to project continuing increase in their requirements into the 90's. Even projecting 1983-93 growth at half the 1973-83 rates, these countries could add another 6 MBD to world demand.

For the Less Developed countries, higher energy use is a key factor in economic and political survival. Though the progress toward economic development that many achieved during the 60's was curtailed and even reversed by the oil price shocks of the 70's, the growing populations and their expectations, and the related political imperatives for their regimes, will force a resumption of development. The process will require greater amounts of energy, and particularly oil, because the non-producing countries lack the alternative technologies and resources available to the developing countries. As a significant source of these oil requirements, Resources for the Future in 1985 described the essential expansion of transportation systems that are created by continuing development and growth.

China reflects the outward potential of modernizing LDC energy requirements: In 1983 with 22% of the world's population, China consumed only 3% of the world's oil supply. One billion Chinese used 1.8 MBD. By contrast, the U.S. with 4.7% of global population consumed 25% of the oil supply -- 231 million Americans used 14.6 MBD. Even modest progress by China alone in closing the industrialization gap would impose substantial pressures on available oil supplies.

Beyond the potential of the non-producing LDCs, the producing countries are consuming more of their production at home to feed growing refining and petrochemical industries that were developed with the proceeds of the oil boom.

In the Soviet bloc, the economies continue to require higher levels of energy inputs to compensate for their built-in inefficiencies. Because the Soviets have progressed with substitution, and have pressured the COMECON countries to use less oil, Bloc consumption has leveled off, though Soviet consumption continues to grow. Still the Polish experience doubtlessly reminded the Soviets of the fragile line between economic distress and political unrest within the Bloc, and the limits to which they can push COMECON partners in a vital resource such as oil. Under the circumstances oil consumption within COMECON will likely continue to increase, though at lower rates.

In the absence of major new oil production outside the Middle East, and considering the prospective declines in U.S. and U.K. production during the 90's, it is clear that the potential OPEC suppliers of last resort will indeed become the suppliers of last resort.

There are some potentially significant additions to supplies in the 90's. Iraq and Iran have the capability to add another 6 million barrels to current production. Mexico and the Soviet Union could add unknown quantities. It is unlikely, though, that these additions, if they occur, would compensate for declines elsewhere, and offset the emerging increases in demand.

Like many of their predecessors that litter the landscape of the past 12 years, these projections of the world oil scene may be equally fragile. But if all, or even some, of these needs actually materialize; if in response to the allure of collapsing prices the marketplace alone becomes the arbiter of energy choices; and if public policy in the major importing nations does not deliberately create alternatives; it is probable that oil exporting countries will become suppliers on their own terms. And we in the industrial importing nations have been down that road before, to our economic distress.

From the perspective of the major oil producing nations who will have surpluses to export, the outlook for the 90's is bright, provided they can hold out that long. For the rest of us, it is ominous. For those among us, such as the U.S., with resources and capabilities to act in our self-interest in advance of adversity, the question is: Will we be wise enough to do so? As for the U.S., given our historic behavior, and our apparent indifference in 1986 to prepare in advance for 1996, the response cannot be encouraging.

####

**J Donald Annett**
Vice President

**Texaco USA**

1050 17th Street NW
Suite 500
Washington DC [illegible]

March 18, 1986

Honorable James McClure
Chairman
Committee on Energy and
 Natural Resources
United States Senate
H-212 Hart Senate Office Building
Washington, D.C. 20510

Dear Chairman McClure:

The Committee on Energy and Natural Resources has recently completed hearings on the current situation in the domestic and international oil markets. You are to be congratulated for the timeliness of the hearings.

Texaco feels that the precipitous decline in U.S. crude oil prices seriously threatens future domestic petroleum production and raises the specter of sharply increasing U.S. dependence on imported oil. As you and the members of your Committee are fully aware, the economic and national security implications of high levels of dependence are quite serious.

A fundamental lesson from the 1970's, when two oil price shocks jolted the U.S. economy, triggering double digit inflation and substantially crimping economic growth, is that the United States can ill efford to be heavily dependent on politically volatile sources of petroleum supply. Unless measures are taken now to insure the viability of domestic supplies in the years to come, the experience of the seventies could be repeated. The Administration and Congress should undertake a comprehensive energy policy review on a priority basis.

Enclosed herewith is a written statement which details Texaco's concerns. We would very much appreciate the inclusion of this statement in the official record of the March 14th hearing. Thank you for your consideration in this matter.

Respectfully,

J Donald Annett

JDA:ceh
Attachment

All Members of the Committee on
 Energy and Natural Resources

# STATEMENT OF TEXACO INC.

SUBMITTED TO THE
COMMITTEE ON ENERGY AND NATURAL RESOURCES

UNITED STATES SENATE

REGARDING

OVERSIGHT HEARINGS ON

"THE DOMESTIC AND INTERNATIONAL
PETROLEUM SITUATION"

MARCH 14, 1986

# THE IMPACT OF PLUNGING OIL PRICES ON U.S PRODUCTION AND NATIONAL SECURITY

## INTRODUCTION

The precipitous decline in U.S. crude oil prices seriously threatens future domestic petroleum production and raises the specter of sharply increasing U.S. dependence on imported oil.

It has been projected that if oil prices average in the $14-15 a barrel range (approximately the current level) through 1990, net oil imports will rise alarmingly to almost half of demand, from about 27% in 1985. This results from both substantial production declines and increases in petroleum demand at the lower prices. Implications of such dependence on oil imports for our national and economic security are grave. The United States depended on net oil imports for only 35% of its needs prior to the 1973 Arab oil embargo, which led to severe shortages and a quadrupling in crude oil prices at the time. U.S. dependence on net imports was about 43% before the Iranian revolution in late 1978 which curtailed supplies from Iran, again leading to major shortages and another dramatic escalation in petroleum prices. The implications of rising oil imports for the national security are further underscored by the fact that 65% of free world oil reserves are in the Middle East where the two supply disruptions in the 1970's occurred.

A fundamental lesson from the 1970's, when two oil price shocks jolted the U.S. economy, triggering double digit inflation and substantially crimping economic growth, is that the United States can ill afford to be heavily dependent on sources of petroleum supply from areas susceptible to external disruption. Unless measures are taken now to insure the viability of domestic supplies in the years to come, the experience of the seventies could be repeated.

## IMMEDIATE EFFECTS OF THE PRICE SLIDE

After peaking in 1981, crude oil prices declined substantially over the next four years and then collapsed in early 1986. This can be seen in Figure 1, which plots the posted price of West Texas Intermediate Sweet (WTI), a representative U.S. crude oil. (Posted price is the announced price which a refiner is willing to pay for a particular type of crude oil. While changes in posted prices vary among refiners, and may lag changes in spot prices in the short run, over time, posted prices and spot prices tend to converge.) In the early 1980's, WTI sold for almost $40 a barrel, but the price declined to about $27 by 1985. Then, reflecting the global turmoil in oil markets, West Texas Intermediate plunged to below $13 a barrel in the spot market.

## EFFECT ON CURRENT PRODUCTION: STRIPPER, MARGINAL, AND HIGH COST WELLS

Production rates begin to fall off when price drops become significant. In the United States, a total of 1.3 million barrels of oil per day is produced from roughly 450,000 stripper wells (wells which produce 10 barrels a day or less), approximately 12-14% of total U.S. production. About 400,000 of this 1.3 million total comes from wells producing 3 barrels/day or less. Production from these low yield wells is particularly sensitive to price, as operating costs for most such wells in the nation's mid-continent area slightly exceeds $15/barrel.

If a $15/barrel price level or below continues, a significant percentage of stripper wells will be plugged and abandoned. Once plugged, many of these wells will be lost forever. A study released by the Interstate Oil Compact Commission projects that 22.5% of all U.S. stripper wells would be abandoned in 1986 if prices are at the $15/barrel level. In Texas and Oklahoma alone, roughly 150,000 barrels/day from stripper wells would be lost.

Texaco has had to evaluate its own producing operation in line with the collapse in oil prices. For example, Texaco USA has been producing roughly 100,000 barrels per day from a steamflood enhanced oil recovery project in California's Kern River Field. In early March, Texaco closed down about 1,500 wells in this field because of collapsing prices. These wells produced over 10,000 barrels per day of oil. Other companies have announced shut-in of over 3,000 wells. If current price levels continue, we would anticipate many more wells will be shut-in as uneconomic.

## INDUSTRY CUTBACKS IN E&P SPENDING WILL REDUCE FUTURE LEVELS OF PRODUCTION

In addition to the immediate reduction in crude oil production from shut-in wells, lower oil prices also portend even steeper future production declines as exploration for new reserves is cut-back. Unless current production is replaced through exploration programs, the depletion of existing reservoirs results in declining volumes of future production.

Cash flow is the combination of earnings and non-cash charges, such as depreciation and depletion, which represent recovery of prior investment. Cash flow determines spending in the oil industry. Cash flow is the prerequisite for the E&P expenditures needed to continually replace reserves. In turn cash flow is highly sensitive to oil prices.

Lower oil prices also adversely affect the economics of new exploration projects by reducing the anticipated rate of return. In recent weeks, reflecting lower cash flow and deteriorating economics, individual firms have announced substantial cuts in their capital and exploration budgets (CAPEX) in direct response to falling crude prices. Exxon and Chevron recently announced that they would reduce their CAPEX budgets by $2 billion and $1.5 billion respectively. Cuts of 10-30% or more have been announced by Texaco, Arco, Phillips, Amoco, Conoco, and Unocal. The Oil & Gas Journal mirrored these reports with its own February 24, 1986 estimate that industry's expenditures in the U.S. upstream will decline over 25% in 1986.

## PROJECTING FUTURE DOMESTIC EXPLORATION SPENDING

Figure 2 demonstrates a strong relationship over time between drilling and real crude oil prices. (Real crude prices are actual crude prices divided by the GNP implicit price deflator to adjust for inflation.) For example, in response to a steady decline in real crude prices, wells drilled declined sharply between 1956 and 1971.

Current events mirror this past performance. Hughes Tool Co.'s data (Figure 3) shows the rotary rig count has plummeted in recent weeks to 1,248 and is still dropping. This is a dramatic falloff from the peak of 4,530 rotary rigs used in 1981. The historical relationship between drilling and price provides little optimism for a rebound in drilling as long as prices remain low. Falling prices and declining exploration set the stage for the shortages and price spikes of the 1970's.

The economics of oil production determines spending for new exploration and production projects in the U.S.A. Simply stated, an operator's anticipated rate of return on new projects and actual cash flow from existing operations dictate that operator's ability to make new investments. Given the present depressed price levels for oil and gas, it should come as no surprise to anyone that the nation's energy producers are having to slash investment budgets. (Figure 4)

Even at high previous spending levels in 1981 and 1982, it should be realized that if one disregards Prudhoe Bay production, the "Lower 48" production has been flat to moderately declining since 1976. If these investments had not been made, "Lower 48" production would have fallen dramatically. Immense E&P spending barely stabilized this production.

## PROJECTING FUTURE DOMESTIC PRODUCTION LEVELS

The Data Resources Inc. U.S. energy model indicates that both petroleum product demand and oil production are significantly responsive to price declines, with the result that lower oil prices result in sharply increased dependence on imports. Figure 5 summarizes DRI's production projections under three price scenarios.

Simulations that DRI ran on its energy model forecast that if crude oil prices are in the $23.00 to $27.00/barrel range (high case) between 1986 and 1990, overall oil demand would fall by about 500,000 barrels a day over that period. Domestic production would fall by about 700,000 barrels a day and net oil imports would rise from about 26.5% of demand in 1985 to 31.0% in 1990.

According to the DRI simulations, if prices run in the $18.00/barrel to $20.00 range (base case) through 1990, domestic production would fall by over 1.1 million barrels a day and demand would rise by 1.2 million barrels a day. Net oil imports would rise to 6.79 million barrels a day (from 4.15 million in 1985) and net oil import dependence would rise to 40.2% (from 26.5% in 1985). In its low price simulation, DRI assumed crude oil prices to average about $14-15/barrel (low case) through 1990. Under this scenario, domestic production would fall 1.7 million barrels a day through 1990, and U.S. demand would increase 3 million barrels a day by 1990. According to this scenario, the United States would be dependent upon foreign sources for almost half of our net supplies by 1990.

In the DRI low case scenario, it should be noted that the slope of the projected production decline reaches a rate similar to that experienced in the early-to-mid 1970's. Assuming a constant reserve-to-production ratio in 1990, it can be projected that the decline in domestic reserves would fall from approximately 28 billion barrels of oil to about 23 billion barrels in 1990 in the DRI low case scenario. They would decline to approximately 25 billion barrels in the DRI high case scenario.

## IMPACT ON NATURAL GAS

Natural gas is also affected by an oil price decline. The Wall Street Journal on March 13, 1986, noted that plunging fuel oil prices were causing many industrial firms, utilities and commercial concerns to switch from natural gas to fuel oil. If firms do not switch, they will use the threat of switchover to force price concessions from gas suppliers. This will exacerbate the cash flow problems of producers who sell both oil and gas. The ultimate result will be lower additions to natural gas reserves as well as oil reserves and reduced levels of future production. In 1984 new discoveries of natural gas were 13.5 trillion cubic feet (TCF) compared to production of 17.2 TCF, while natural gas reserves dropped to their lowest point since 1951 at 197.5 TCF.

Likewise, the low natural gas prices that are the result of low crude prices do not provide any incentives for the exploration and drilling for gas. The failure to find and develop new reserves will accelerate the depletion of the current gas deliverability surplus and set the stage for gas shortages in the future.

## ENERGY/NATIONAL SECURITY POLICY IMPLICATIOS

In the late 1970's (see Figure 6), the United States was dependent on imported crude oil and petroleum products for as much as 47 percent of its demand. This made the United States vulnerable to periods of supply disruption which resulted in sharply higher prices. In 1985 this dependency was reduced to a net import level of 27% through a combination of increased price incentives to the industry and conservation. The DRI low case supply and demand projection ($14 - 15 per barrel) indicates that our country's import dependency would soar again to almost 50% by 1990.

As the gap between domestic production and demand widens and is swiftly filled by rising imports, the stage is set for another oil shock. If oil imports again rise to almost 50 percent of total demand, the United States will have exceeded the level of vulnerability previously reached in the late 1970's - just before the Iranian Revolution.

There is a disturbing sense of the past repeating itself in the current euphoria over oil price declines. The attractiveness of significant stimulants to many sectors of the economy has apparently caused some policy-makers to forget the lessons of the 1970's - that approximately 65% of the Free World's oil reserves are located in the Middle East and that excessive dependency on that area of the world has led directly to economic shocks and serious foreign policy problems. Senator Lloyd Bentsen (D-TX) has noted that "if we learned anything from the Arab oil embargo of 1973, it's that we cannot afford to get hooked again."

Similarly, many alternate energy projects will be terminated, although it is obvious that such projects are needed to replace declining domestic production and declining domestic reserves. The painful U.S. experience of the 1970's has surely taught Americans that dependence has very real consequences. Many of today's glowing economic statistics will be turned upside down with another oil disruption, if we permit the domestic producing industry to be shattered.

The Economic Modeling Forum (EMF) is a Stanford University institute set up to compare the results derived from various economic models of government energy policies or market changes. In a study based on the EMF, Professor James Sweeney of Stanford looked at a scenario in which U.S. production fell off 1.1 MMB/D by 1990. A supply disruption in that time frame would raise crude oil prices by $33 per barrel, increase unemployment by 2 percentage points, increase the federal budget deficit by $25 billion and decrease real GNP by 4.9 percent. For purposes of comparison, a real GNP decline of "only" 1.7 percent between 1981 and 1982 constituted the worst recession since the

Great Depression. If analysts are right in predicting that we could see declines in U.S. production nearing 2 MMB/D, about twice the decline utilized in the Sweeney study, major new national policies must be implemented promptly.

## CONCLUSION:

The U.S. Government should undertake a comprehensive energy policy review on a priority basis. A determination should be made as to the minimum level of domestic crude production required to protect our energy and national security. Key areas of the economy will be adversely affected if increasing levels of petroleum imports lead to the reestablishment of OPEC's control over the market and another supply disruption. These areas include GNP growth, employment, inflation, interest rates, trade deficits and the federal budget.

Ultimately there is the issue of national security. The U.S. has already lost some stripper production on a permanent basis. More production will be lost each passing week if prices continue at current levels or slide further. Domestic exploration programs have been severely cut and important parts of the oilfield equipment infrastructure have been lost. In 1985 U.S. domestic crude oil production averaged 8.9 million BPD. If U.S. policy is to sustain this level of production, forceful government policies must be adopted immediately. We should not let production simply drift to lower levels without a conscious policy decision as to what the national interest dictates. If lower levels of production are acceptable, the minimum level nonetheless must be promptly identified and appropriate policies put in place to ensure, considering operational lead times, that these levels are not breached.

A listing of some of the more critical issues and questions relevant to the determination of the minimum level of U.S. production required by our energy and national security is set forth below. Responsibility for the resolution of these economic, trade, energy policy and national security issues lies in many different departments, agencies, and committees in both the Executive and Legislative branches of the U.S. Government. Leadership and coordination will be required to ensure that such divided responsibility does not result in the failure of any party to accept responsibility for these difficult and complex matters which vitally affect the national interest. In the past, there has been a tendency to deal with politically difficult problems of this nature only in a crisis. Unfortunately, our country's inability to address and resolve such problems in advance of a crisis cost the U.S. economy in the 1970's billions of dollars in addition to a loss of policy flexibility and significant additional costs in the areas of both foreign policy and defense.

In the absence of any indication of a policy shift by the U.S. Government, it is reasonable to anticipate that, if present trends continue, U.S. companies will continue the disturbing pattern of production shut-ins and exploration cutbacks required by plunging cash flows. Texaco believes that current trends and developments in the energy sector contain the potential for a future shortage which could compromise our economic and national security to a greater extent than in the 1970's.

Issues to be Addressed:

1. To what level must domestic crude production fall before the economic, national security and foreign policy concerns outweigh the short-term economic benefits of low oil prices?

2. How much current domestic crude oil production becomes uneconomic at prices of $15, $10, or $7 per barrel, and how much production is likely to be shut in at these prices?

3. In each case, how much of that shut-in production could be restored if prices rise to 1985 levels, and how much of a time lag is expected? How much of that shut-in production is expected to be irrevocably lost?

4. If prices remain low for a prolonged period of time resulting in a production decline, how much lead time and what expenditures will be required to mount a crash exploration program to prevent excessive reliance on imports?.

5. At what level of import dependency does OPEC regain control over the market?

6. What will be the effect on today's record trade deficits if petroleum imports rise at projected rates?

7. Will increased future imports be in the form of crude oil or products? If products imports greatly increase, what will be the impact on the domestic refinery industry?

8. What areas of the world will supply the incremental crude imports? How politically stable are these areas?

9. What additional national security costs will be borne by taxpayers to protect against supply disruptions? For the Strategic Petroleum Reserve? For the Rapid Deployment Force? For the U.S. Navy to assure that sea lanes are secured?

FIGURE 1

# CRUDE OIL PRICES

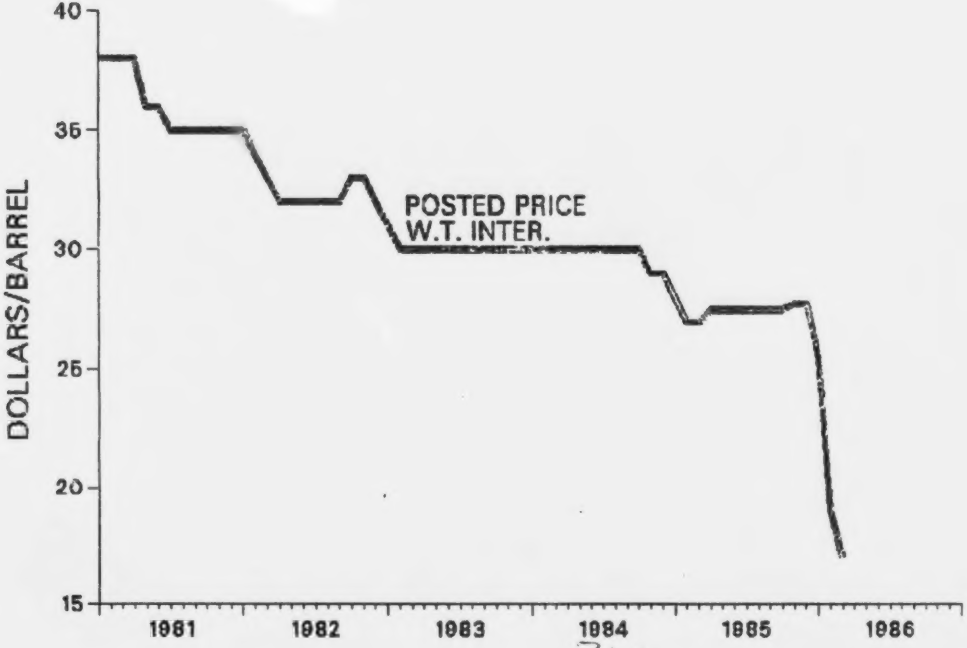

FIGURE 2

## TOTAL WELLS DRILLED VS REAL CRUDE PRICES

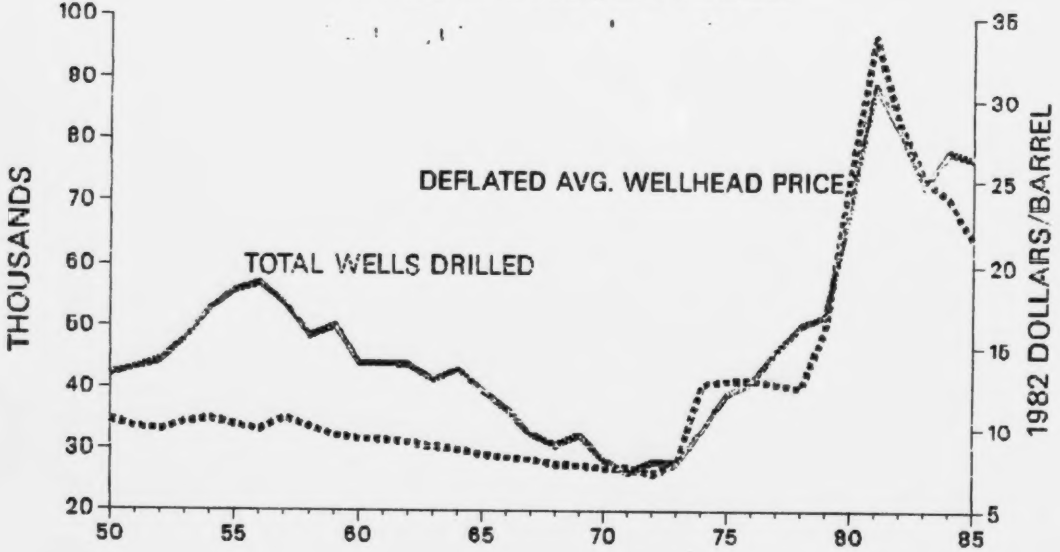

*FIGURE 3*

HUGHES RIG COUNT

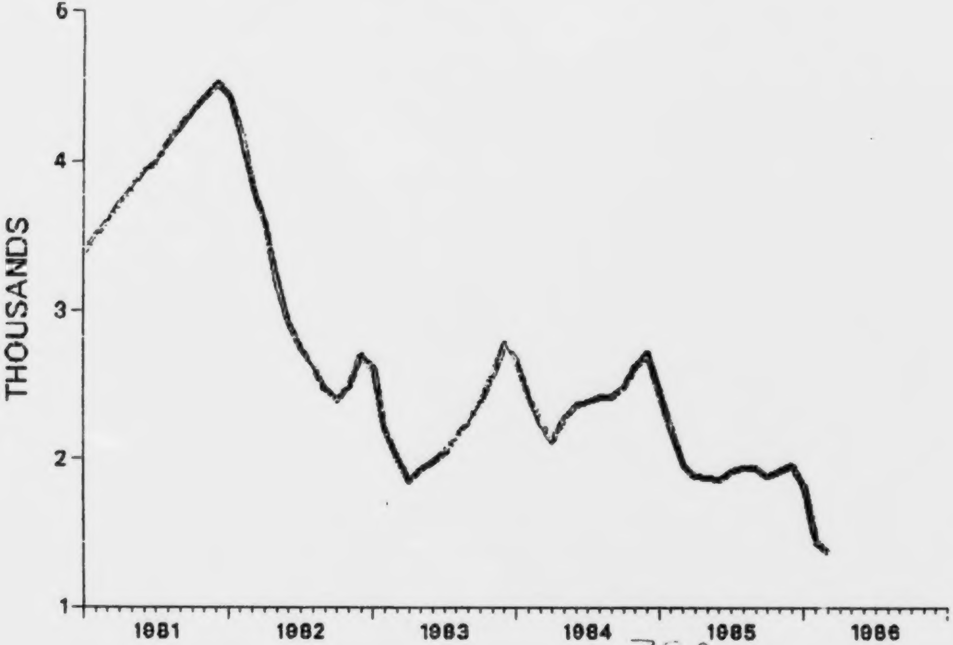

FIGURE 4

## EXPL. & DEV. EXPENDITURES VS PRICE OF CRUDE OIL

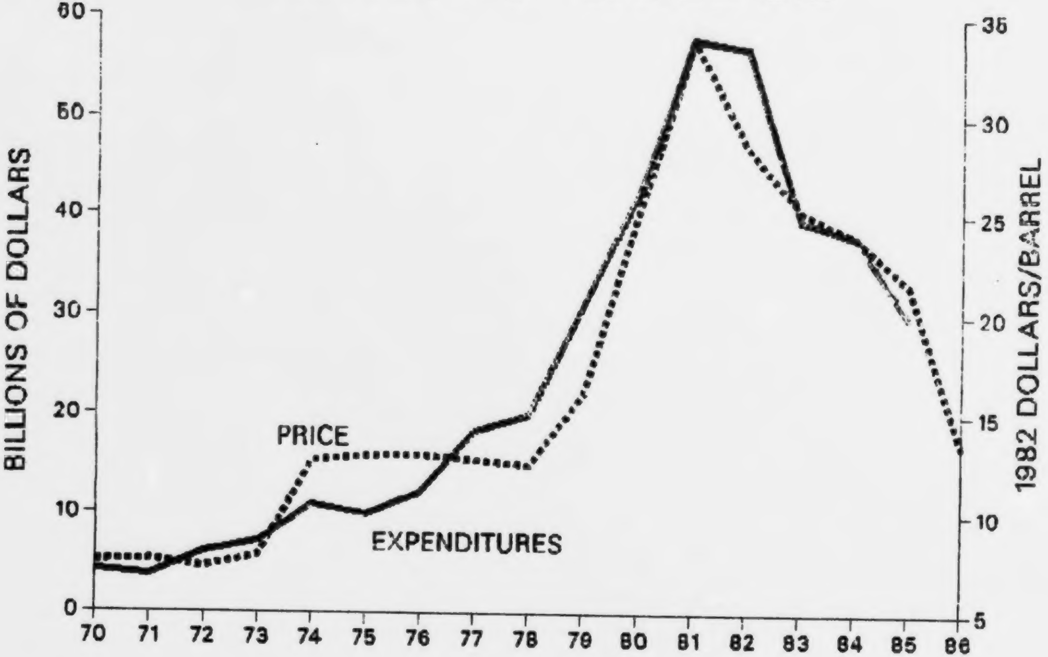

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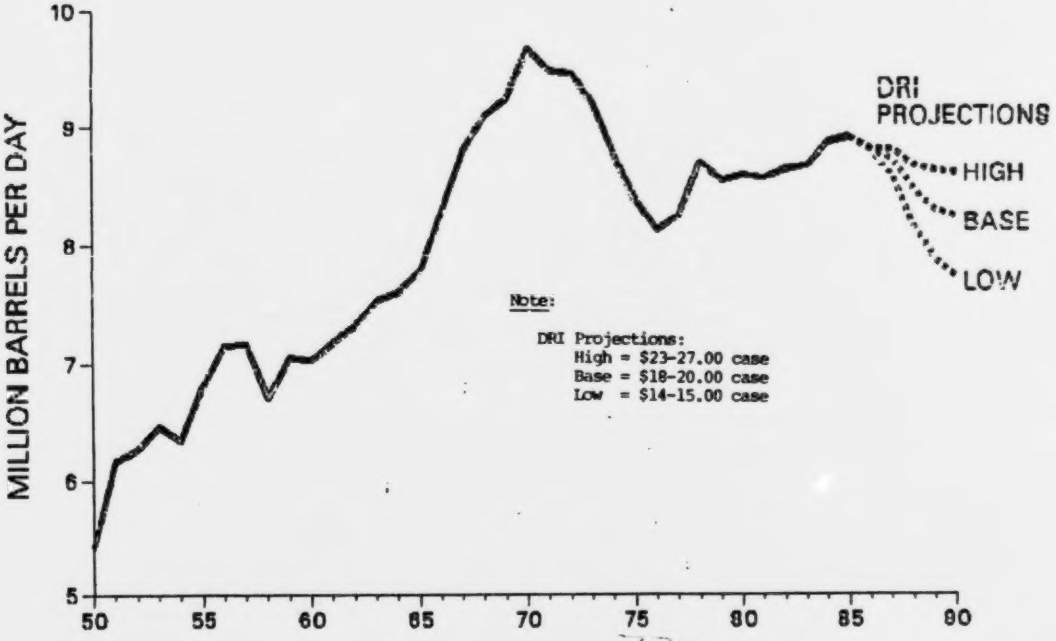
FIGURE 5

## U.S.CRUDE OIL PRODUCTION

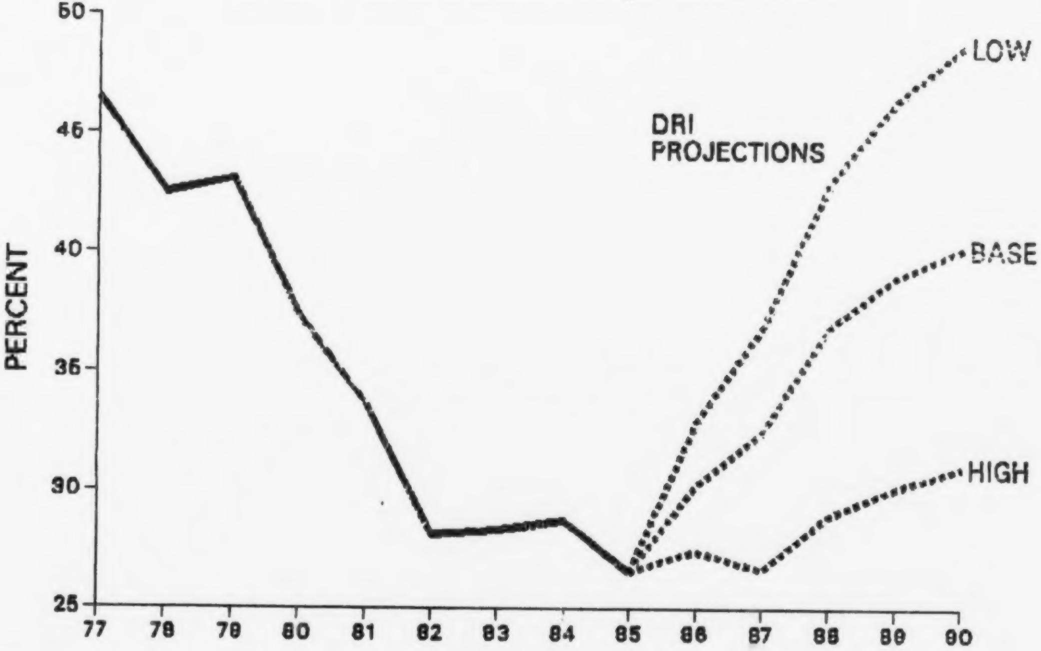


**Note:**

DRI Projections:
High = $23-27.00 case
Base = $18-20.00 case
Low = $14-15.00 case

FIGURE 6

# NET IMPORTS AS A % OF U.S. PETROLEUM DEMAND



771

American Automobile Association

8111 Gatehouse Road
Falls Church Virginia 22047 0001
703 AAA 6000

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SENATE COMMITTEE ON
ENERGY AND NATURAL RESOURCES
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MAR 21 1986
WASHINGTON D.C. 20510

March 18, 1986

The Honorable James A. McClure
Chairman
Committee on Energy and Natural Resources
358 Dirksen Senate Office Building
Washington, D.C. 20510

Dear Mr. Chairman:

The American Automobile Association, with more than 26 million members, strongly opposes either an increase in the federal excise tax on gasoline or the imposition of a tax on imported oil, as a means to stabilize domestic oil prices, to finance proposed changes to the U.S. Tax Code, or to offset the federal budget deficit.

We believe that the imposition of a gasoline tax increase would be particularly discriminatory and regressive, and if enacted, would create a variety of economic hardships, including the following:

-- A gasoline tax would not be spread equally among U.S. consumers. For example, people who drive in Wyoming use twice as much gasoline as those in New York (658 gallons to 268 gallons on a per capita basis). This raises an obvious question: Should people who live in states with large land areas and little public transit bear the brunt of tax revision or deficit reduction?

-- Households with incomes less than $7,400 spend more than twice as much of their incomes on gasoline (8.2 percent) as households with incomes of $36,900 or more (3.7 percent), according to the Congressional Budget Office.

-- Among consumers earning less than $5,000 a year, 80 percent commute to work by private vehicles, according to the U.S. Department of Transportation.

-- The travel and tourism industry--among the top three industries in most states--is highly gasoline dependent. Some 60 to 80 percent of all travel away from home in the U.S. is conducted by private vehicles. Thus, a gasoline tax would have enormous repercussions throughout the travel industry and adverse effects on the U.S. economy as a whole.

-- Any new deficit-related tax measure will create a "fiscal drag" on the economy, reduce consumer and business purchasing power, and decrease federal revenues from other taxes, according to the Congressional Research Service.

-- A new gasoline tax would preempt efforts by states to raise revenues of their own through state fuel tax increases for needed highway transportation improvements.

For these reasons, AAA urges you and members of your committee to reject any proposal to raise revenue through a new gasoline or petroleum tax.

Thank you for considering our views.

Sincerely,

John Archer
Managing Director
Government Affairs

JA/lb

cc: All Members of the Senate Committee on Energy and Natural Resources

PETROLEOS MEXICANOS

1101 15TH STREET • SUITE 505 • WASHINGTON, D.C. 20005
TELEX (WESTERN UNION) [illegible]
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March 18, 1986

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MAR 19 1986

The Honorable James A. McClure
Chairman
Committee on Energy and Natural
Resources
United States Senate
SD-358 Dirksen Senate Office Building
Washington, D. C. 20510

Re: Oil Import Fees

Dear Mr. Chairman:

As General Representative of Petroleos Mexicanos ("Pemex"), I appreciate being given this opportunity to comment on the oil import fee proposal being considered by the Committee on Energy and Natural Resources. My comments will discuss potential adverse effects of proposed oil import fees, addressing the impacts on Mexico and Pemex. I respectfully ask that these comments be included in the record of the Committee hearings being held on this issue.

In my capacity as General Representative of Pemex in the United States, I urge that import fees not be imposed. Oil import fees will hurt both the American and Mexican economies. Each country is a major trading partner of the other and, because of that interdependence, the damage which the proposed oil import fees would cause to the American economy would, in turn, adversely affect the Mexican economy even if Mexico did not export oil.

However, Mexico would be especially hurt by the proposed legislation since Mexico relies on oil exports for about 75% of its foreign exchange revenues. Continuing access to United States markets for Mexican oil is essential for the Mexican economy. Oil export revenues are essential to Mexico's ability to

- purchase imports from the United States,
- manage our debts to the United States and
- meet the needs of a populous developing country.

Oil import fees, coming on the heels of declining world oil prices, would intensify the already acute foreign exchange problem Mexico faces, to the detriment of both Mexico and the United States.

## Pemex

Pemex is the public decentralized organism of the Mexican Federal Government charged with the development of Mexico's hydrocarbon resources. It is therefore the sole producer and seller in Mexico of crude oil. It is also the only Mexican producer and seller in Mexico of various down-stream petroleum or petrochemical products, such as gasoline and distillate heating oil. This Pemex role results from Article 27 of the Mexican Constitution of 1917, according to which all ownership and administration of Mexico's hydrocarbon resources reside in the State.

The United States is the principal destination for Pemex oil exports and, since 1982, Pemex has been the largest supplier of oil to the United States. Pemex supplies almost 20% of all crude oil imports to the United States and about 6% of all crude oil used by American refiners. During some months, Pemex sales of crude oil and products to the American market have exceeded 800,000 barrels per day. Pemex sells oil at competitive market prices. Pemex itself also imports petrochemicals, equipment and spare parts from the United States.

### A. Oil import fees would hurt the American economy, thereby hurting Mexico, and would undermine stability of American energy policy

The United States has tried and rejected oil import fees before. Reimposing oil import fees would increase prices, raise input costs of American industries, and slow the American economy.

The injury to the American economy as a whole would be substantial because oil import fees would raise the price of all oil in the United States, domestic as well as imported, and might well push up prices of other domestic fuels as well, while fuel prices in Europe, Asia, and other economies would decline (due to decreased U.S. consumption caused by higher U.S. prices). Although American oil producers and refiners would benefit from only about two-thirds of the amount of an import fee, as I will later explain (in C. below), American energy consumers would suffer the entire detriment of the fee.

Reimposition of oil import fees would also cast doubt upon the stability of American energy policies. As a principal supplier of imported oil for the American market, Pemex has a vital stake in such stability.

American oil import fees were suggested as an alternative to import quotas in 1970 by a Cabinet Task Force chaired by George Shultz, then Secretary of Labor. Fee-paid import licenses, with gradually-diminishing exemptions and escalating fees (up to 21¢ per barrel of crude oil and 63¢ per barrel of product), were imposed by President Nixon in 1973; however, the exemptions deferred the practical impact of the fees. In 1975, President Ford imposed much higher supplemental fees (of $1 per barrel escalating to $2 and then $3). Although these fees were sustained by the Supreme Court, FEA v. Algonquin SNG, Inc., 426 U.S. 548 (1976), and went into effect, President Ford rescinded them in 1976, restoring President Nixon's fees and timetable. These were suspended by President Carter in 1979 just when they might have become fully effective. Then in 1980 President Carter proclaimed a new oil import fee, to be passed on only to gasoline, which was struck down by the United States District Court. Independent Gasoline Marketers Council, Inc. v. Duncan, 492 F.Supp. 614 (D. Ct. D.C. 1980). President Reagan revoked the license requirement to which oil import fees had been tied.

For the past five years, the principal thrust of American energy policy has been deregulation, to the benefit of the American economy. For Congress to reimpose oil import fees now would raise the spectre of renewed twistings and turnings, policy reversals and regulatory complications.[1] Experience suggests that policy insecurity will dilute much of the benefit proponents hope to achieve for domestic producers.

### B. Oil import fees would set back efforts to expand free trade and would stimulate protectionism

The United States has embarked on a significant effort to achieve genuinely freer trade with all of its trading partners in Europe, Asia and the Americas. For the United States itself to adopt oil import fees would fly in the face of that effort, reinforcing resistance to more open markets for American exports.

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[1] For example, it is likely that industrial users of oil and its derivatives will seek exemption from (or a bureaucratic system of rebates of) the import fee to the extent that they export products (such as petrochemicals) made from oil. The same logic would apply to users of domestic oil as to users of foreign oil, although the relief may differ. Sorting out the claims of the American exporters may lead to the restoration of a network of oil price rules and regulations.

Similarly, American industries would be stimulated to seek new protections. As a result of oil import fees, American industries would feel themselves at a competitive disadvantage both in exporting to the world and in meeting imports and would press for import protection to compensate for the higher costs imposed by the import fee.

The Committee is considering these oil import fee proposals just at the time when Mexico has agreed to negotiate to join the GATT and to enter into additional bilateral trade negotiations with the United States, following up Mexico's liberalization of trade regulations last year. Enactment of these bills at this time would impair efforts toward further progress in trade relations and might be adverse to these positive steps.

The United States and Mexico need one another. Our two countries trade in many commodities and finished products. The United States is Mexico's largest supplier and largest customer and Mexico is the fourth largest market for the United States. Disruption of that trade through an oil import fee would have an adverse impact on both the United States and the Mexican economy.

### C. An oil import fee would further depress Mexico's oil prices

An oil import fee would further depress the prices Mexico receives for its oil exports. An oil import fee would set a price differential between oil inside the United States and oil on the world market equal to the amount of the fee. That differential would not come about entirely by raising the American domestic price. In part, the fee would lower the world market price. For example, assume a fee of $6 per barrel. United States consumption is about 15 million barrels a day and consumption in the other market-economy countries is about twice as much, or 30 million barrels a day. If the short-run price elasticity is roughly equal in both areas (say, as low as 0.1) then the effect of the import fee would be divided inversely to the 2:1 proportion of consumption: 2/3 to the U.S. market and 1/3 to the rest of the market. If, then, the hypothetical $6 fee added $4 in the U.S. to an assumed pre-fee price level of $16 (that having been both the U.S. and world price level), it would bring the U.S. price up to $20. That 25% price increase would reduce U.S. consumption by 2.5% (= 0.1 x 25%) or

375,000 barrels a day. A $2 drop in the world price would come about so as to increase consumption in the rest of the world by 1.25% to absorb the 375,000 barrels per day (= 30 million barrels a day x $2/$16 x 0.1) which were added to non-United States supplies as a result of the decrease in United States consumption.

A $2 per barrel drop in the world oil price, which is what Mexico would receive for all of its exports, would amount to a cut of about 14% in terms of mid-February 1986 price levels for Mayan crude, Mexico's predominant export grade.

### D. Proposed oil import fees would discriminate against Mexican oil

Several proposals would establish flat import fees, to apply equally to all crude oils. Crude oil is not a homogenous commodity. Indeed, United States refiners have spent billions of dollars to upgrade refineries to be able to take a variety of crude oils, including low quality crude oils. It costs more to turn low value crudes than high value crudes into gasoline and other marketable products. (For example, it may take twice as much energy to refine one crude as another.)

The marketplace takes account of value differentials, pricing Pemex's predominant Mayan crude, for example, at significantly less per barrel than the price of its Isthmus crude, while placing a premium on high value crudes, such as Libya's.

A flat import fee does not take account of value and thus discriminates against below-average crude oils (and against refiners that invested to be able to handle such crudes). Pemex's mix of crude oils is of a lower value, on the average, than the mix of most other exporting countries. Thus, the flat crude oil import fees of so many dollars per barrel -- without regard to value -- would penalize Mexico as compared with most other countries with higher value crudes. Indeed such import fees would depress the relative values of all low value crudes (whether produced in Mexico or California) and enhance the relative worldwide value of all high value crudes (whether produced in Libya or Louisiana). This discrimination would parallel what happened to California heavy oil during the last episode of United States oil pricing regulations.[2] A flat import fee would depress the value of California heavy oil (and other low-value domestic crude oils) relative to high value domestic crude oils.

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[2] Then a flat dollars-per-barrel entitlement requirement so depressed the value of the heavy oil to refiners that production was shut in during a period of oil shortages.

E. Proposed oil import fees disregard the reliability of Mexican oil

The United States economy needs imported oil. The United States does not produce enough oil to meet its needs and has no plan for doing so. Strategically, immediate neighbors are the most secure source of supply. The Cabinet Task Force on Oil Import Control so concluded in 1970. Mexico offers a reliable and economic source of supply on which the United States can rely. The United States benefits from, and should therefore not wish to discourage, oil imports from Mexico.

Mexico needs marketing security in order to maintain the capability of supplying oil for all the varied needs of the United States. The U.S. has had every reason to encourage Mexico to develop Mexican oil resources. It would be counter-productive now to impede Mexico's oil exports to the United States.

As the Committee considers this legislation, I urge you to weigh not only immediate circumstances that have prompted these proposals but also the likely adverse effects of the proposed fees on long-term trade and strategic interests.

In conclusion, let me again express my appreciation for being permitted to share Pemex's concerns with the Committee. Please let me know if there are any points on which you would wish me to augment these comments.

Sincerely,

PETROLEOS MEXICANOS

Alfredo Gutierrez Kirchner
General Representative

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Canadian Embassy
Ambassade du Canada

1746 Massachusetts Ave. N.W.
Washington, D.C. 20036

March 3, 1986

SENATE COMMITTEE ON
ENERGY AND NATURAL RESOURCES
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MAR 12 1986
WASHINGTON, D.C. 20510

The Honourable James A. McClure
Chairman
Senate Committee on Energy and
Natural Resources,
361 Senate Dirksen Office Building
Washington, D.C. 20510

Dear Senator McClure,

I would like to draw your attention to the concerns of the Canadian Government regarding various proposals before Congress for an oil import fee.

During the past two years, Canada and the United States have benefitted from remarkable progress in their bilateral energy relations. This has been accomplished by removing restrictions and by placing our bilateral energy trade, valued at over ten billion dollars annually, on a market-sensitive basis.

During their Summit meeting in Quebec City in March 1985, Prime Minister Mulroney and President Reagan strengthened this approach by committing the two governments to removing barriers to energy trade and to maintaining and extending open access to each other's energy markets. In June 1985, both countries took significant steps to remove restrictions on their petroleum imports and exports to one another.

As a consequence of these developments, Canada-USA petroleum trade has grown to the point where Canada currently supplies over 15 percent of total USA oil imports, and is the second largest supplier of petroleum to the USA. There is also a growing two-way trade in refined petroleum products. This progress could be at risk if current proposals to apply an oil import fee were to be adopted.

Viewed in a broader context, an oil import fee could also run counter to commitments by members of the International Energy Agency (IEA), including Canada and the USA, to liberalize trade in petroleum products. Moreover, an import fee on petroleum products would be inconsistent with USA obligations under the General Agreement on Tariffs and Trade (GATT) which could lead supplying countries to seek compensation or to withdraw equivalent concessions with respect to USA exports.

In summary, Canada has serious concerns regarding the proposals for the imposition of an oil import fee.

Yours sincerely,

Allan Gotlieb
Ambassador

February 3, 1986

On November 14, 1984, the Board of Directors of the North Texas Oil and Gas Association unanimously approved the following statement:

Petroleum Tax Equalization

Domestic producers of petroleum face an economic crisis of such proportions that it renders the industry unable to meet even nominal goals for finding and producing petroleum reserves. At the heart of this economic crisis is the increasing reliance on foreign crude and refined products and the growing dominance of spot market pricing in lieu of historical long term contractual marketing. The domestic industry has the capacity to replace annually the reserves of oil and gas consumed, but in order to do so must have market stability and a price which encourages the capital investments needed for a maximum exploration effort.

Imported petroleum causes disruptions in domestic markets, pays almost no taxes, results in a substantial loss of American jobs, increases the nation's balance of payments deficit, and undermines national security. Imported petroleum has a noncompetitive advantage over competing domestic production stemming from federal, state, and local taxation policy.

The Board of Directors of the North Texas Oil and Gas Association supports the imposition of a tax to equalize the treatment of imported and domestic petroleum (both crude and refined products) and opposes any policies which would impose new taxes on the domestic producing industry.

Recent developments affecting the independent oil and gas industry have only served to reinforce the above stated position adopted by NTOGA one year ago.

**1106 City National Building, Wichita Falls, Texas 76301 Telephone (817) 723-4131**
Ed S. Spragins, President L.D. Burns, Vice President Jimmy Prickett, Vice President Tom Haywood, Executive Vice President

There are several reasons why the present circumstances warrant support of an import fee on imported crude oil and refined products.

1. MARKET INSTABILITY

The unpredictable and often volatile policies of those nations which determine the world pricing system cause substantial disruptions in orderly domestic production and consumption. This results in an inefficient allocation of resources. Monopolistic power has led to predatory pricing policies by exporting nations.

2. NATIONAL SECURITY

The security of a nation is measured not only by its military strength but also by its economic strength. Economic strength can be preserved and reinforced only if there is certainty that the security of the U.S. does not rest in the hands of foreign suppliers. Economic vulnerability would inevitably result from long term dependence on sources which have previously proven to be unstable and unreliable.

3. REVENUE ENHANCEMENT TO THE FEDERAL TREASURY

Historically, tariffs have been used to collect revenue for the government. A fee on imported crude and refined products can contribute to a reduction of the federal deficit. It is a well accepted fact that a large federal deficit tends to crowd out interest sensitive private sector spending. According to estimates by the Congressional Budget Office, a $5.00 per barrel fee on all oil would provide revenue enhancement of $9.1 billion in FY 1988.

4. CONSERVATION

The current worldwide "glut" of energy, in a large degree, resulted from price driven conservation. The falling price of energy reduces the incentive for the development of available reserves, further development of alternative resources, and the achievement of national goals of conservation.

5. BALANCE OF PAYMENTS

The failure to reduce the dependence on imported crude and refined products will result in continuing an already unfavorable balance of payments. In 1984 the U.S. suffered a record trade deficit of $123.3 billion, nearly double the old record set in 1983.

6. BANKING

The domestic banking industry has already experienced well publicized difficulties associated with plunging oil prices and sharp declines in exploration activity. Without the stabilization of the domestic oil markets, the banking industry can be expected to experience even greater losses.

7. ENVIRONMENT

Natural gas is the cleanest burning fuel available to American homes and industry. In contrast to coal, there are no undesirable emissions when natural gas is burned. Further, under the environmental and legal restrictions currently existing, it is clear that no substantial growth of nuclear energy for the generation of electricity is possible. Therefore, a strong domestic oil and gas industry is essential to the environmental concerns of our nation.

February 3, 1986

SUMMARY

A properly constructed import fee is necessary in order to stimulate competition between domestic and imported crude and refined products. It equalizes the tax distribution of all the petroleum consumed by this nation. The renewal of competition would in turn cause the sales and price of domestic crude to stabilize. Additional benefits would include the extended life of marginal production, increased domestic exploration activity, and the generation of revenue which would go to the U.S. Treasury. Not only would an import fee aid in the reduction of the balance-of-payments problem, but it would also enhance national security by bolstering domestic economic strength. Further benefits would accrue to the U.S. in the form of conservation of precious resources which are essential to the nation's future.

It is clear that unless the current policies of our nation are changed, we will certainly become even more dependent on foreign sources of energy in the next decade. A national energy plan which points the way toward aggressive development of domestic resources is desperately needed. Tax policy will be a part of energy policy and we urge that the import fee previously discussed become a part of a national energy plan.

**Wichita Falls Times** Wichita Falls Texas, Sunday Morning, February 2, 1986

# Drilling activity falls in uncertain market

DALLAS (AP) — Energy experts say uncertain world oil prices pushed domestic drilling activity to historical low points nationwide this week.

The number of Texas rigs has dropped to 560, the lowest point since October 1974, based on the Hughes Tool Co. rotary rig count.

The barometer of oilfield drilling activity dropped to 1,671 in the United States, representing the lowest level since September 1976, officials said.

Experts said reduced drilling activity, one symptom of the recent plunge in world oil prices, was expected to be followed by more consolidations, joint ventures and bankruptcies in the drilling and oilfield services sectors.

Drilling and exploration dropped significantly since crude oil prices started declining in 1983, depressing the prices oil drilling and service companies can charge.

"Pricing pressures are competitive as ever," Guy Marcus, spokesman for Dallas-based Halliburton Co., told The Dallas Morning News.

Prices for spot oil dropped again. West Texas intermediate, the U.S. benchmark crude, closed at $19.66 a barrel on the New York Mercantile Exchange in contracts for March delivery, down from an earlier $20.17 close.

Officials said Houston-based Global Marine Inc., the largest publicly owned oil service company in the United States, filed for reorganization under federal bankruptcy laws Monday because of the offshore drilling rig contractor's $1.1 billion debt.

Western Co. of North America, a Fort Worth-based oil industry service company, reported losses of $67.3 million in 1985, bringing Western's three-year cumulative losses to $106.2 million.

Company officials blamed the losses on declining demand for onshore pressure pumping services.

"The degree of uncertainty is so great that people are waiting," said Ike Kerridge, chief economist at Hughes Tool. "They see no reason to start drilling programs if they don't know the price of oil and the effects of pending tax legislation.

"The industry doesn't like the uncertainty. It's risky enough without it," he said.

Kerridge said drilling plans can resume when oil prices show some signs of stability and tax consequences for the energy sector are settled in Congress.

'It will be an awfully tough first half of the year," he said. "There will be more companies filing for Chapter 11, or merging or forming partnerships."

Houston Chronicle
January29, 1986

# Rig count drops to lowest level since September 1976

By BARBARA SHOOK
Houston Chronicle

The number of drilling rigs searching for oil and gas in the United States fell to its lowest point in more than nine years for the week ended Monday.

Hughes Tool Co. said 1,671 rigs were operating, the least since September 1976. This week's total is down 102 from the previous week.

The only major state to register a gain for the week was Kansas, which was up two, said Hughes Tool Vice President J.C. Kerridge. Overall, drilling activity is down almost 30 percent from the same time last year and has dropped 12 percent in the past month.

Kerridge said the historic seasonal decline in the first quarter was combined with uncertainty about prices for oil and gas. Almost all major oil companies have lowered the price they will pay for crude in recent weeks, and several have reduced prices twice since the beginning of the year.

Utilization for offshore mobile rigs also was off sharply, dropping to 72.2 percent in the Gulf of Mexico and 80.9 percent worldwide, according to the Offshore Intelex weekly survey.

The drop in drilling activity coincides with the falling prices of crude oil futures, but Michael Simmons, drilling editor for Offshore Intelex, said the decline in drilling did not directly result from the lower oil prices.

"Anticipation of lower oil prices has long been a major factor for oil companies to consider in planning exploration programs," Simmons said. "The drop in oil prices confirms their expectations."

Most companies had been using lower oil prices in planning their drilling programs. Simmons does not expect any improvement until prices stabilize.

Parker Drilling Co., one of the nation's largest drilling contractors, also cited mergers, corporate restructuring and possible changes in tax laws for the low level of drilling activity.

## RIG ACTIVITY

| | Jan. 27 | Jan. 20 | Year ago |
|---|---|---|---|
| Texas | 560 | 576 | 789 |
| Louisiana | 236 | 252 | 343 |
| Oklahoma | 235 | 242 | 297 |
| Kansas | 77 | 75 | 105 |
| Wyoming | 71 | 82 | 112 |
| N. Mex | 54 | 62 | 60 |
| California | 64 | 71 | 93 |
| U.S. Gulf | 182 | 192 | 219 |
| **U.S. Total** | **1,671** | **1,773** | **2,303** |
| Canada | 466 | 469 | 376 |
| Worldwide Offshore | 606 | 622 | 656 |

Source: Hughes Tool Co., Offshore Intelex

# An Executive Summary of the White Paper, "A Study of Economic Impacts of a Variable Fee on Imported Crude Oil" by Dr. Yoshi Fukasawa.

Summary Prepared By

Dr. Tom Haywood, Executive Vice President
North Texas Oil and Gas Association
1106 City National Building
Wichita Falls, Texas, 76301
817-723-4131

In his paper, Dr. Fukasawa examines the effects of a proposed fee on imported oil and the rationale which makes oil a special case, providing justification for market intervention. He notes that the world market was once dominated by OPEC, but has now become a buyer's market, strongly influenced by effective conservation measures, the cyclical decline in demand from consuming nations, and a host of relatively new exporters of crude. He discusses the notion that the importance of oil to an industrial economy, as well as to world trade, and the peculiar characteristics of the world supply make oil a unique commodity justifying deviation from the conventional rules and wisdom of international trade policy.

In order to make the analysis a manageable project, Dr. Fukasawa chose to address only the subject of crude oil imports. Thus, the larger question of product imports is not addressed. Much of the discussion could be applied equally well to product imports, but the fine tuning of the arguments would have necessitated many more pages and thus might have been an impediment to understanding by the nonspecialist in the field.

Dr. Fukasawa states that the net benefits to the U.S. of imported oil may be maximized by appropriate government intervention. He explains his thoughts by appeal to a Laffer-type diagram, as shown on the following page. The Laffer approach is best known for its use in providing an understanding of the interplay of excessive taxation and the disincentive for taxpayers to strive to increase their income. It is equally appropriate as a tool to aid in the understanding of aspects of the oil import fee issue.

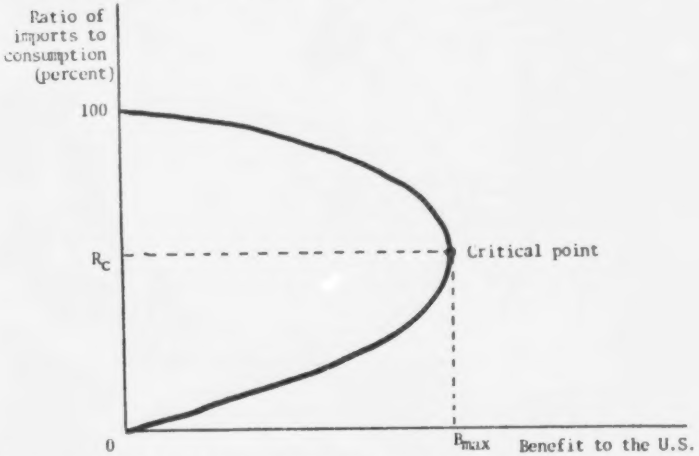
The figure shows the relationship between the ratio of imported oil to total U.S. consumption (represented by the symbol R) and the net benefit of imports to the U.S. It is assumed that there exists a critical point, labelled $R_c$, which maximizes the benefits to the U.S. of imported oil. As the level of imported oil increases from 0 to $R_c$, the net benefit increases, while the benefit may decline as the ratio rises above $R_c$. It is probably not necessary to discuss in detail why the points representing $R = 0$ (no imports) and $R = 1$ (100% imports) represent undesirable and unachievable extremes. No attempt has been made to assign a specific value to the critical ratio of imported oil to total U. S. consumption. However, the value of $R_c$ would be affected by considerations of balance of payments, military and economic security, dependability of energy supply, realistic assessment of current domestic energy-producing capacities and costs per BTU, "hidden costs" of imports (military, SPR filling and maintenance costs, etc.), federal budget deficits, probability of retaliation by crude oil exporting nations, the creation of jobs within the U.S. economy, conservation of proven domestic resources of energy, reduced demand for energy in all forms, potential impact on the banking industry, alternative fuels development, as well as numerous other factors.

Dr. Fukasawa discusses briefly the predatory incentive existing within OPEC to recapture domination of the market by making it economically unfeasible for domestic producers to stay active in exploration and production.

Dr. Fukasawa expresses the opinion that one way to achieve import reductions is to place a fee on imported oil which would lower imports to a level at which the benefits of increasing prices are in balance with the cost of reducing domestic consumption and production. He recognizes that there are various forms an import fee could take; but, for reasons involving his own understanding of sound economic theory, as well as his own assessment of the most likely direction political leaders might take regarding this subject, discusses in detail only the variable fee concept. The variable fee approach envisions the establishment of a floor price, with the fee related to the difference between the world price and the floor price. In particular, he indicates preference for the variable fee because of the stabilizing influence on prices it would have.

Analyses contained in the paper show that the implementation of a fee would raise the price of imported oil in the U.S. by an amount less than the amount of the duty, as foreign producers lower their prices in an attempt to maintain sales in the fee-imposing country. The increase in the price of domestic production would also be less than the amount of the fee.

Dr. Fukasawa also concludes that a country that is a major importer of a product, such as the U.S. in the case of oil, is in a favorable trade situation. Thus, it may be able to use its commercial policy, i.e. an import fee, in order to improve the terms of trade at which it trades and hence the national welfare.



Source: Adapted in a modified form from the Laffer Curve, Thomas J. Hailstones, A Guide to Supply-Side Economics (Richmond, VA: Robert F. Dame, Inc., 1982). ch. 9.

January 30, 1986

# OIL AND GAS TAX RECOMMENDATIONS

by the

# NORTH TEXAS OIL AND GAS ASSOCIATION

In order to formulate recommendations to decision makers involved in the so-called tax reform legislation, the North Texas Oil and Gas Association has thoroughly analyzed current law, HB 3838, and other proposals of which we are aware. This analysis was done in terms of the impact of each proposal on the ability of the independent oil and gas industry to explore for and produce petroleum reserves to meet the economic and strategic needs of our nation. As a result of this study, we have reached certain conclusions and developed specific recommendations which in our opinion will allow the domestic industry to meet the goals of petroleum energy supply.

The results of this analysis are presented in the form of four major conclusions and six specific recommendations.

## CONCLUSIONS

1. Government tax policy can be directed to either encourage or discourage domestic energy production. Under current tax law, the domestic industry is in a severe economic slump resulting in declining production of oil and gas below a level sufficient to insure economic and national security.
2. HB 3838, if enacted, would further depress the domestic oil and gas industry by discouraging the flow of capital for exploration and production into this high risk, capital intensive industry.
3. If current law is to be changed, the changes should be designed to encourage growth in the domestic energy industry. This will require appropriate tax law changes to encourage active exploration by independent oil and gas producers who historically drill 90% of the exploratory wells and 85% of all wells.
4. If appropriate tax law changes are made to encourage exploration by independents, this will result in greater revenues for the federal treasury in a relatively short period of time.

## RECOMMENDATIONS

To Encourage Capital Formation:

1. We recommend an "Earned Drilling Deduction" for independent producers and repeal of percentage depletion for non-stripper wells on January 1, 1987. The "Earned Drilling Deduction", which would not be a tax preference item, is computed at 15% of an independent producer's gross income from non-stripper oil and gas wells, limited to the current year's dry hole and intangible drilling and development costs, including that portion which is required to be capitalized under HB 3838. Any unused portion could be carried forward.

2. Investment tax credit (ITC) is essential to all American business productivity if our nation is to compete effectively in the world marketplace. We recommend that ITC be retained as in current law.

3. Under HB 3838, the lives for computing cost recovery have been greatly extended for the type of equipment used in exploration and production of oil and gas. We recommend that the cost recovery system under current law be retained.

4. We recommend the removal of excess intangible drilling costs as a tax preference item to encourage risk capital to be invested into the domestic petroleum industry.

To Encourage Conservation of Established Reserves:

5. When a producing oil and gas property is purchased from a major oil company by an independent, under the Transfer Rule, the windfall profit and depletion tax status of the major company is retained as to the property by the independent company. Major oil companies, which have high fixed costs of operations, cannot economically operate marginally-profitable properties. We recommend repeal of the Transfer Rule, which would allow independents to keep the properties producing much longer.

6. As contained in HB 3838, percentage depletion should be retained for stripper wells just as in current law. This will encourage the nation's smaller producers to keep these wells active and extend their economic life so that the maximum amount of petroleum will eventually be produced from these marginally-profitable properties.

# A STUDY OF ECONOMIC IMPACTS OF A VARIABLE FEE ON IMPORTED CRUDE OIL

Prepared

for

North Texas Oil and Gas Association

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# A STUDY OF ECONOMIC IMPACTS OF A VARIABLE FEE ON IMPORTED CRUDE OIL

This paper examines the effects of a proposed fee on imported oil and the justifications behind such intervention. A tariff may positively affect society as it equalizes the private and social costs of imported oil while maximizing net benefits by improving the U.S. terms of trade. This is accomplished as the tariff serves the dual function of taxing oil consumption and subsidizing domestic oil production.

The special characteristics of oil trade which differentiate it from other types of international trade are discussed. While government intervention may indeed be justified, it is not without possible negative effects. The various ramifications that an oil fee would have on the U.S. and the world are discussed including the possibility of retaliatory actions by oil exporting countries.

## Introduction

The world oil market continues to defy even a reasonable level of predictability. The world oil market has turned into a buyer's market after almost a decade of producer's control, highlighted by the "oil shocks" of 1973 and 1979. The pattern and composition of the world oil market have shown dramatic changes. The market which was once dominated by the members of OPEC is now influenced not only by effective conservation measures and the cyclical decline in the demand of consuming nations but also by the increasingly potent forces of such new suppliers as Great Britain, Norway, Mexico, China and others. As a consequence, OPEC appears to be in disarray causing the average price of its "marker" crude, Saudi Arabian Light, to fall from $34 per barrel in 1981 to $28 per barrel in 1985 with most spot prices well below that level.[1] Prospects for decisive actions by OPEC in order to regain control of the world oil market in the immediate future appear to be nil[2].

The fall in the price of oil in the world market has been perceived as a welcome event for consuming nations. Falling prices of oil, for example, have contributed to the general abating of inflation in the U.S. and have tended to raise the real income of American consumers. Falling prices have also tended to contribute to the reduction in the nation's balance-of-payments. Thus, free flow of cheap foreign oil tends to enhance the nation's welfare, at least in the short run.

For a variety of political and economic reasons, some government and industry leaders have been heard to suggest the imposition of a tariff or a quota on foreign oil[3]. This paper examines the economic impacts of a variable fee imposed on foreign oil. The paper attempts to analyze some of the economic factors involved without supporting or opposing such a fee. The paper is intended to provide a general overview of the subject rather than specific proposals to redress the problem. The paper begins with a review of the world oil market and U.S. imports of foreign oil for the period between 1973 and 1984. The basis for and effects of a variable fee on oil imports are then discussed, followed by concluding remarks.

## Oil Production and Imports: Basic Data

The pattern and composition of the world oil production and U.S. imports have changed dramatically in the last twelve years. OPEC accounted for over half of the total world production of crude oil in 1973, but by 1984, the OPEC share was down to one-third, as shown in table 1. In the same period that

OPEC production was dropping, production by Mexico, China, USSR, and the United Kingdom increased, thus boosting total non-OPEC production from 44.3 percent in 1973 to 67.1 percent in 1984. Though production declined somewhat in the intervening years, the U.S. production level of 16.2 percent in 1984 was only slightly lower than the 16.5 percent share in 1973, as shown in table 1.

--INSERT TABLE 1 HERE--

Though OPEC production steadily decreased from 1973 to 1984, U.S. imports of OPEC oil continued to grow until 1977 when 70.3 percent of all imported oil came from OPEC, as shown in table 2. The importation of OPEC oil dropped to a low of 36.9 percent of all imports in 1983, and rose slightly to 38.1 percent in 1984. Canadian imports decreased from 21.2 percent in 1973 to 5.6 percent in 1978. By 1984, crude from Canada made up 11.5 percent of all imports. OPEC and Canadian crude together accounted for almost 70 percent of all imports in 1973, but only 50 percent by 1984. The 20 percent difference was made up largely by Mexico and the United Kingdom. These two countries provided only 0.6 percent of all U.S. imported crude in 1973, but by 1984, that figure was up to 20.8 percent, as shown in table 2.

--INSERT TABLE 2 HERE--

## Rationale for Government Intervention

International trade theory demonstrates that free trade leads to a higher level of welfare for the world as a whole than

## Table 1

### Crude Oil Production for Major Petroleum Producing Countries

(Percent of the Total)

| Year | Algeria | Iraq | Kuwait[1] | Libya | Qatar | Saudi Arabia[1] | United Arab Emirates | Arab Members OPEC[2] | Indonesia | Iran | Nigeria | Venezuela | Total OPEC[3] | Canada | Mexico | United Kingdom | United States | China | USSR | Other[4] | Total Non OPEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1973 | 2.0 | 3.6 | 5.4 | 3.9 | 1.0 | 13.6 | 2.8 | 32.3 | 2.4 | 10.5 | 3.7 | 6.0 | 55.7 | 3.2 | 1.8 | 0.0 | 16.5 | [illegible] | 15.2 | 6.6 | 44.3 |
| 1974 | 1.5 | 3.5 | 4.6 | 2.7 | 0.9 | 15.2 | 3.0 | 31.7 | 2.5 | 10.8 | 4.0 | 5.3 | 55.0 | 3.0 | 1.0 | 0.0 | 15.7 | [illegible] | 16.1 | 6.8 | 45.0 |
| 1975 | 1.9 | 4.3 | 3.9 | 2.8 | 0.8 | 13.4 | 3.1 | 30.2 | 2.5 | 10.1 | 3.4 | 4.6 | 51.4 | 2.7 | 1.3 | 0.0 | 15.8 | 2.5 | 18.2 | 7.7 | 48.6 |
| 1976 | 1.9 | 4.2 | 3.7 | 3.4 | 0.9 | 15.0 | 3.4 | 32.4 | 2.6 | 10.3 | 3.6 | 4.0 | 53.6 | 2.3 | 1.4 | 0.4 | 14.2 | 2.9 | 17.7 | 7.4 | 46.4 |
| 1977 | 1.9 | 3.9 | 3.3 | 3.5 | 0.7 | 15.5 | 3.3 | 32.2 | 2.3 | 9.5 | 3.5 | 3.7 | 52.4 | 2.2 | 1.6 | 1.3 | 13.8 | [illegible] | 17.9 | 7.6 | 47.6 |
| 1978 | 1.9 | 4.3 | 3.5 | 3.3 | 0.8 | 13.8 | 3.0 | 30.7 | 2.7 | 8.7 | 3.2 | 3.6 | 49.6 | 2.2 | 2.0 | 1.8 | 14.5 | 3.5 | 18.6 | 7.8 | 50.4 |
| 1979 | 1.9 | 5.6 | 4.0 | 3.4 | 0.8 | 15.2 | 2.9 | 33.7 | 2.5 | 5.1 | 3.7 | 3.8 | 49.5 | 2.4 | 2.3 | 2.5 | 13.7 | [illegible] | 18.3 | 7.9 | 50.5 |
| 1980 | 1.7 | 4.2 | 2.8 | 3.0 | 0.8 | 16.6 | 2.9 | 32.0 | 2.7 | 2.8 | 3.5 | 3.6 | 45.2 | 2.4 | 3.3 | 2.7 | 14.4 | [illegible] | 19.8 | 8.7 | 54.8 |
| 1981 | 1.5 | 1.8 | 2.0 | 2.0 | 0.7 | 17.6 | 2.6 | 28.2 | 2.9 | 2.5 | 2.6 | 3.8 | 40.5 | 2.3 | 4.1 | 3.2 | 15.4 | [illegible] | 21.3 | 9.6 | 59.5 |
| 1982 | 1.3 | 1.9 | 1.5 | 2.2 | 0.6 | 12.1 | 2.3 | 22.0 | 2.5 | 4.1 | 2.4 | 3.5 | 35.3 | 2.6 | 5.1 | 3.9 | 16.2 | [illegible] | 22.6 | 10.5 | 64.7 |
| 1983 | 1.3 | 1.9 | 2.0 | 2.0 | 0.6 | 9.6 | 2.2 | 19.5 | 2.6 | 4.6 | 2.3 | 3.3 | 33.2 | 2.7 | 5.1 | 4.3 | 16.4 | [illegible] | 22.7 | 11.6 | 66.8 |
| 1984 | 1.2 | 2.2 | 2.1 | 2.1 | 0.7 | 9.1 | 2.2 | 19.6 | 2.8 | 4.0 | 2.4 | 3.4 | 32.9 | 2.6 | 5.1 | 4.5 | 16.2 | [illegible] | 22.0 | 12.4 | 67.1 |

[1] Includes about one-half of the production in the former Kuwait-Saudi Arabia Neutral Zone. In September 1984, total production in this region amounted to approximately 380,000 barrels per day.

[2] Arab members of the Organization of Petroleum Exporting Countries (OPEC) include Algeria, Iraq, Kuwait, Libya, Qatar, Saudi Arabia, and the United Arab Emirates.

[3] OPEC total includes production in Algeria, Iraq, Kuwait, Libya, Qatar, Saudi Arabia, United Arab Emirates, Indonesia, Iran, Nigeria, Venezuela, Equador, and Gabon.

[4] Other is a calculated total derived from the difference between world production and the nations represented above.

Notes: °U.S. geographic coverage is the 50 States and the District of Columbia.
°Monthly data are often preliminary figures and may not average to the annual totals because of rounding or because updates to the preliminary monthly data are not available.

Source: Energy Information Administration DOE, Monthly Energy Review, September 1984, pp. 108-109.

Table 2

## Crude Oil and Petroleum Product Imports

| Year | Total OPEC | Total Arab[1] OPEC | Canada | Mexico | United Kingdom | Total Non-OPEC |
|---|---|---|---|---|---|---|
| 1973 | 47.8 | 14.6 | 21.2 | 0.3 | 0.3 | 52.2 |
| 1974 | 53.7 | 12.3 | 17.5 | 0.1 | 0.1 | 46.3 |
| 1975 | 59.5 | 22.8 | 14.0 | 1.2 | 0.2 | 40.5 |
| 1976 | 69.3 | 33.2 | 8.2 | 1.2 | 0.4 | 30.7 |
| 1977 | 70.3 | 36.2 | 5.9 | 2.0 | 1.4 | 29.7 |
| 1978 | 68.8 | 35.4 | 5.6 | 3.8 | 2.2 | 31.2 |
| 1979 | 66.7 | 36.1 | 6.4 | 5.2 | 2.4 | 33.3 |
| 1980 | 62.2 | 36.9 | 6.6 | 7.7 | 2.6 | 37.8 |
| 1981 | 55.4 | 30.8 | 7.5 | 8.7 | 6.3 | 44.6 |
| 1982 | 42.0 | 16.7 | 9.4 | 13.4 | 8.9 | 58.0 |
| 1983 | 36.9 | 12.5 | 10.8 | 16.4 | 7.6 | 63.1 |
| 1984 | 38.1 | 15.4 | 11.5 | 13.6 | 7.2 | 61.9 |

[1] Includes Algeria, Libya, Saudi Arabia, United Arab Emirates, Iraq, Kuwait, and Qatar.

°Geographic coverage is the 50 states and the District of Columbia.
°Beginning in 1977, Strategic Petroleum Reserve imports are included.

Source: Energy Information Administration DOE, Monthly Energy Review, September 1984, pp. 46-47.

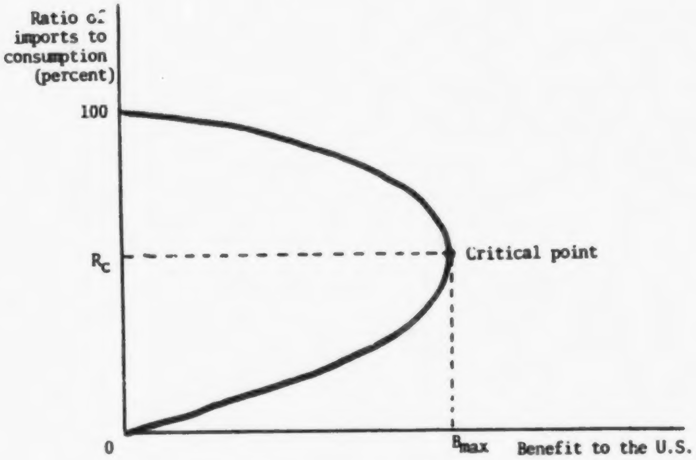
without trade by allowing more efficient allocation of economic resources worldwide.[4] Free trade enables each nation to obtain a higher level of consumption and production than can be obtained in isolation. Relating this to the issue under consideration, it can be said that even when the price of oil was rising, imports could not have been replaced by domestic oil at the same or lower cost. The U.S. benefits from imported oil. It would, therefore, be unwise for a nation to adopt a policy of eliminating all imported oil.

However, it may be beneficial for a country to reduce, not eliminate, the quantity of imports under certain special conditions. It is suggested that the net benefits of imported oil to the U.S. may be maximized by appropriate government interventions to reduce the quantity of oil which is imported.

The argument can be illustrated with the use of the modified Laffer-type diagram shown in figure 1[5]. The figure shows the relationship between the ratio of imported oil to total U.S. consumption and the net benefit of imports to the U.S. As the level of imported oil increases from 0 to $R_c$ the net benefit increases while the benefit may decline as the ratio rises above $R_c$. The net benefit of imported oil declines because the total cost begins to rise faster than the benefit associated with the last barrel of imported oil. It is assumed that the ratio of imports to consumption at $R_c$, the critical point, the net benefit to the U.S. may be maximized. It should be noted, however, that it is not within the scope of this paper to assign a specific value to Rc.

--INSERT FIGURE 1 HERE--

Figure 1



Source: Adapted in a modified form from the Laffer Curve, Thomas J. Hailstones, A Guide to Supply-Side Economics (Richmond, VA: Robert F. Dame, Inc., 1982), ch. 9.

The notion of the potential maximization of the net benefits of imported oil by imposing a fee rests on the assumption that the fee would change the terms-of-trade between the U.S. and oil exporting countries[6]. It is the proposition that some part of the fee is absorbed by foreign suppliers when the price elasticity of import supply is less than infinite and the price elasticity of import demand is greater than zero. Given these elasticity conditions, the imposition of a fee raises the domestic price of imported oil less than the amount of the fee as foreign suppliers lower their prices in an attempt to maintain sales in the U.S. The price that the U.S. pays to oil exporters for the imported oil falls while the price the U.S. charges to foreigners for its exports remains the same. Thus, the terms-of-trade for the U.S. would improve. The U.S., being a significant importer of oil in the world market, can act as a monopsonist to improve its terms-of-trade by lowering the price it pays while importing a smaller amount of oil.

It is important to note at the outset that the maximization of net benefits accruing to the U.S. by imposing a fee on imported oil is achieved at the expense of the oil exporting countries. Import reduction can enrich the U.S. at the expense of oil exporters and may often result in the loss of welfare to the world as a whole. Manipulation of the world oil price by imposing a fee is not, therefore, recommended as a general approach to normal trade relations. Thus, if the use of monopsony power is to provide the basis for market intervention, it requires additional justification that makes oil a special case.

Bohi and Montgomery pointed out three basic reasons why oil is a special case[7]. The first and most obvious is that the supply of oil in the world market is significantly influenced by the cartel of OPEC. The use of monopsony power is justified as a form of retaliation to reduce monopoly rents. Secondly, the use of monopsony power by the U.S. is considered beneficial to other oil importing nations because their energy costs are reduced. A restrictive trade policy would not cause a chain reaction among other trading partners of the U.S. Finally, economic vulnerability of the U.S. to oil exporting countries is reduced. The importance of oil to an industrial economy as well as to world trade, and the peculiar characteristics of the world supply make a unique commodity that justifies deviations from conventional rules and wisdom of international trade policies.

There are additional considerations to be taken into account with respect to the world oil market and the U.S. economy. The relevant considerations include the world oil market instability, the U.S. government deficit, weakened energy conservation efforts, domestic energy development strategy, and military security.

Market stability usually refers to the market condition without excessive fluctuations in prices. The world oil market was stabilized in some sense by the OPEC cartel in the 1970s. In the past several years, however, new market instability has been introduced to the world oil market by the weakening of the cartel, brought on by the sharp drop in world-wide consumption, growing excess supplies, and considerable stockpiling, mounting pressure to reduce prices.

Falling prices are usually considered to be beneficial to the economy. The oil market, however, appears to be an exception to the general rule. From the conservation point of view, continuous decline in oil prices, and therefore, the prices of gasoline and other derivatives, tend to weaken the desire for better utilization of finite resources and further development of alternative sources of energy. From the domestic production point of view, a falling price is a disincentive for further exploration of domestic reserves and the development of new and more efficient technology necessary for the recovery of oil.

A more important consideration is the fact that the falling prices may be used by OPEC to recapture the market by making it economically infeasible for domestic producers to stay in the market[8]. This predatory incentive may be real considering a substantial production cost difference between some of the OPEC producers and the U.S. producers and because of the militant history of the OPEC nations[9].

The proposed fee will also contribute to the reduction of the mounting federal government deficit. A reduction in the deficit which is estimated to be some $200 billion per year for the next several years would be conducive to the sustainable growth of the U.S. economy.

**A Variable Fee**

There are two basic forms of a fee that may be applied to imported oil, fixed or variable fee. Under a fixed fee, the tariff on imported oil remains at the same level regardless of the price of oil in world market. On the other hand, the amount of the fee may change under a variable fee system.

Under a variable fee system market price stability may be achieved by establishing the price of oil at a predetermined level[10]. The variable fee may be used to close the gap between the established price and world market price for oil. A fall in the world price would automatically increase the amount of the imposed fee. An increase in world price would decrease the amount of the imposed fee, with increases beyond the predetermined level eliminating the fee completely.

The incentive for foreign producers to raise the price by restricting the quantity of exports exists. However, the current disarray among OPEC members would reduce that possibility significantly as compared to the 1970s. The increasing presence of non-OPEC suppliers also reduces that risk.

It is argued that a variable fee is preferable to a fixed tariff because the latter would only increase the price of oil without stabilizing the market. In other words, under a fixed fee the domestic price of oil would fluctuate alongside the world oil price, while the variable fee would tend to reduce the fluctuation by establishing the floor in the U.S. market.

The imposition of a fee on imported oil will reduce the level of the U.S. dependence on foreign oil. If properly designed, the fee will lower imports to a level at which the benefits of increasing prices are in balance with the cost of reducing domestic consumption and stimulating domestic production in the U.S.

The imposition of a fee by the U.S. will affect other oil importing countries as well as oil exporting countries. The U.S. is only one of a number of nations participating in the world oil market, yet it is such a large participant, that other oil consuming nations and oil producers will be affected by a reduction in U.S. demand. In a perfectly competitive market, each participant simply chooses the preferred level of supply of imports on the basis of the prevailing price, and the price adjusts to make supply equal demand. Therefore, other things remaining equal, a reduction in U.S. import demand would make supply exceed demand which would cause the price of oil to fall in the world oil market. As the price fell, other consuming nations would increase their imports, while oil producers who wished to maximize current profits would reduce their exports. The price decline would end when quantity demanded and quantity supplied were brought back into equilibrium.

However, it is possible that a declining price would cause foreign producers to increase output. This may happen if foreign producers have objectives other than profit maximization, for example, a constant net revenue from oil exports[11]. Depending on the foreign producer's behavior, the effect that an import reduction policy would have on price is less certain.

The motivations of oil-exporting countries are not clearly understood nor is the degree to which world oil markets approach the competitive norm. Hence caution is in order in interpreting the costs and benefits of a fee designed to reduce world oil prices. A reduction in oil imports may produce a gain in economic welfare, but the gain depends on favorable conditions in the oil market. Moreover, if the threat of retaliation is real, other less visible means of reducing oil imports may be preferable to a fee.

## Social and Private Costs of Imported Oil

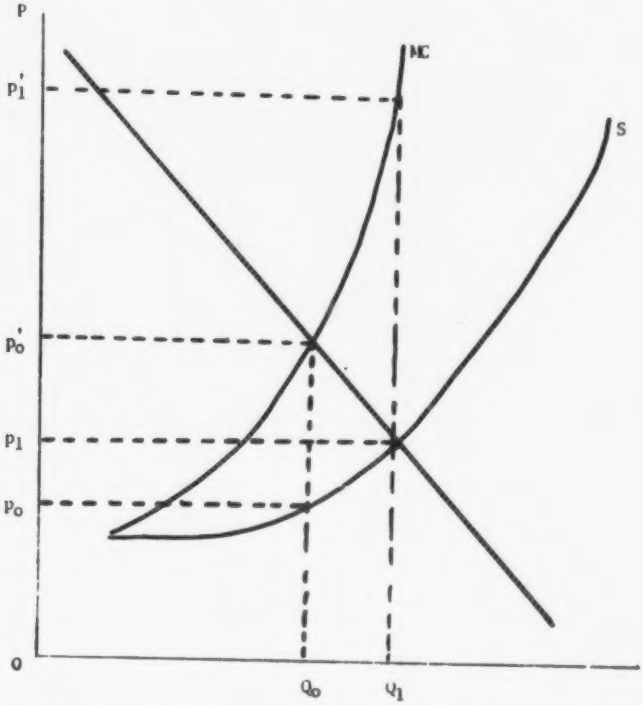
The world oil market is neither perfectly competitive nor monopolistic, which implies that the two well-defined market structures of economic analysis do not strictly apply. However, it is plausible to assume that the supply of oil imports available to the U.S. is a positive function of the world price. The appearance and increasing importance of non-OPEC producers in U.S. import share with the rise in oil prices in recent years is consistent with this view. This assumption is based on the fact that an increase in the price of oil stimulates further exploitation of existing oil and makes it available for sale in markets by encouraging additional investments in drilling, refining, and distribution.

A supply curve shown in figure 2 can be used to illustrate the difference between the marginal social cost and the marginal private cost of imported oil[12]. It is important to recognize that a fee on foreign oil is a marginal concept that applies to the last increment of imported oil. For the U.S. economy as a whole, the cost of the last increment is its effect on total import cost.

--INSERT FIGURE 2 HERE--

The curve S in figure 2 represents the amounts of foreign oil that would be supplied and made available to the U.S. at various prices. As the price of oil rises, the amount of

Figure 2



imports supplied will increase. The S curve also represents the marginal private cost of oil by indicating the additional price individuals must pay for an additional unit of imported oil in the market. The per unit price is Po for volume Qo and P1 for the higher volume Q1. Po and P1 represent the private cost at the levels of imports of Qo and Q1, respectively. The marginal cost of oil to the nation is measured by the change in the total cost of oil resulting from the move from Qo to Q1, which increases from PoQo to P1Q1, divided by the change in imports Q1-Qo. From the inspection of these two rectangles in figure 2, it is evident that the change in the total costs exceeds P1.

A numerical example may clarify the point. Suppose that the U.S. exercises monopsonistic power in the world oil market. Suppose the U.S. imports 40 million barrels (Qo) of foreign oil per year at the world price of $25 (Po) per barrel. The U.S. total oil import expenditure is $1 billion per year. Suppose the price rises to $26 (P1) with 50 million barrels of imports (Q1). The marginal cost to individuals therefore rises by $1. However, the total expenditure in the U.S. increases by $300 million to $1.3 billion. The marginal cost to the U.S. of the increased imports is thus $30. In other words, one additional barrel of oil, when the imported oil increases from 40 million to 50 million barrels, costs $1 more to individuals but $4 more to the U.S. as a whole per barrel. The marginal social cost of imported oil exceeds the marginal private cost because the U.S. would pay the higher price for all the imported oil, not just for the additional barrels of imports.

It is in this sense that a fee may be imposed on imported oil to redress the difference between the cost of imported oil to individuals and to the society as a whole. The discrepancy between the cost to individuals and to the U.S. economy collectively implies that oil consumption and production decisions will not be based on the time value of oil. In this case, individuals in the U.S. tend to consume more and produce less oil at the market price than is socially optimum.

Government policy appropriate to reduce such discrepancy includes some combination of a tax on oil consumption and a subsidy to domestic oil producers. A fee on imported oil serves both ends simultaneously. More specifically, the discrepancy between the social cost and private cost of imported oil can be minimized by the imposition of a fee equal to the difference Po' and P1.[13] The resultant higher price will reduce quantity demanded of imported oil and lower the import price to Po.

## ECONOMIC EFFECTS OF AN IMPORT FEE

The preceding analysis of an import fee dealt mainly the rationale for a government intervention by highlighting the potential gain to be achieved with the fee without explicitly recognizing potential losses to the society. Essentially the gain from a fee to the U.S. is derived from a decline in the world price of oil by the use of monopsonic power, while the losses result from an increase in the price of oil to domestic consumers. A fee is desirable only when the gain exceeds the loss. This section covers the standard treatment of the potential gain and loss resulting from the imposition of a fee on imported oil.[14]

A fee imposed on imported oil is a tariff with a complex array of economic effects. A tariff, in general, tends to reduce the efficiency in resource allocation, generate government revenue, and cause the redistribution of income among countries and within countries between procedures and consumers.

In particular a fee imposed on imported oil tends to discourage consumption and encourage domestic production of the affected products. It raises the price of the products in the domestic economy and tends to reduce the price to be paid to foreign producers.

The immediate effects of an import duty are those reflected in price changes and consequent adjustments in production and consumption. The magnitude of the price change depends on the elasticities of demand and supply of the product subject to the fee. In general, the more elastic the demand or the less elastic the supply of the product subject to a fee, the smaller the increase in the domestic price and the larger the decrease in the world price.

In addition to the direct price effect of an import fee, there are multiple consequences that may occur in the economy. The change in quantity demanded of crude oil will start a chain reaction involving a change in the demand for the factors of production. The resulting change will affect the relative costs of the factors of production and their reallocation. This, in turn, will alter the pattern of production, consumption and international trade in a variety of products via price and income changes.

Consider the case in which an importing nation accounts for a significant portion of world market. A large importing nation, such as the U.S. in the oil market, is important enough to affect the terms at which it trades. Changes in a large country's trade policy such as the imposition of an import fee on crude oil can therefore influence the distribution of the gains from trade that affect its national welfare.

One of the rationales for an import fee is that it may enable the U.S. to extract a gain from trade with the use of monopsonist power. A fee-imposing nation acts as a monopsonist who restricts the level of crude imports in order to reduce the price at which it imports oil. The reduction in the amount of imports by the imposition of a fee, would result in a decline in the prices it pays to foreign producers. A gain from trade is achieved by the improvement of the importing nation's terms-of-trade. But an importing nation would face a decline in its national welfare if the negative effects of a reduced quantity of trade outweighed the positive effects of a favorable change in the terms of trade.

The partial and static equilibrium condition of a proposed fee is shown in figure 3. Sd represents the supply curve of oil in the domestic economy. D depicts the domestic demand. Point E shows equilibrium in the oil market in the U.S. in the absence of imports. With free trade, the U.S. faces an overall supply of Sd+m, derived from both domestic production and import. The overall supply curve is upward-sloping because the price of imported crude is not a fixed constant. In other words, the higher the price that the U.S. is willing to pay for the import, the greater will be the quantity of crude supplied and made available for export to the U.S. Without any trade restriction, the U.S. achieves market equilibrium at point Eo. The price of crude oil falls to Po, domestic consumption rises to Qo, and domestic production falls to Q'o. Excess home demand is crude met by imports totalling (Qo - Q'o).

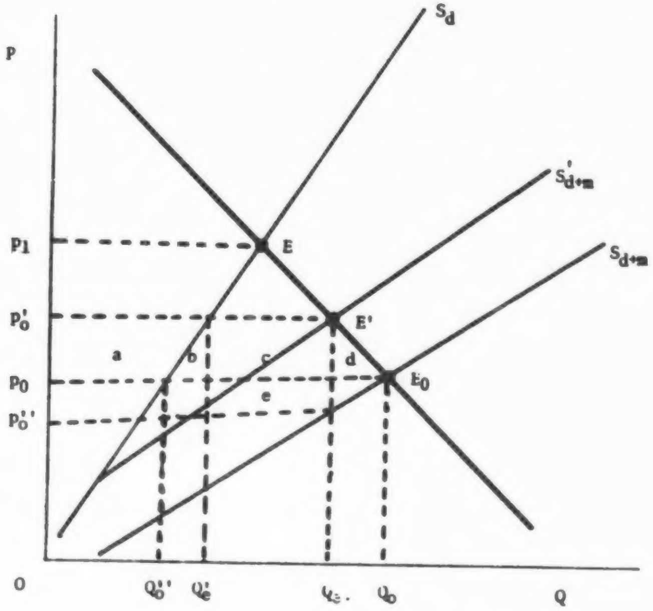
--INSERT FIGURE 3 HERE--

Suppose that the U.S. imposes a fee of P'oP"o on imported oil. By increasing the selling cost, the fee results in a shift in the foreign supply curve from Sd+m to S'd+m. Market equilibrium moves from points Eo to E', while the oil price in the U.S. rises from Po to P'o. The area "a" represents the redistribution effect, whereby income is transferred from consumers to domestic producers in the U.S. Area "b" represents a loss of national welfare resulting from the inefficient use of resources, by encouraging more costly domestic production. The triangle "d" shows a loss of consumer's welfare because of the limit placed on consumer choice by a fee. Areas "b" and "d" are often referred to as a deadweight loss.

The revenue effect of a fee is determined by multiplying the fee per barrel (P'o - Po") times the number of barrels of oil imported at the after-fee price of P'o. The government revenue is equal to the areas "c" and "e." The revenue occurring to the U.S. government comes from foreign producers (e) as well as from domestic consumers (c). Area e represents intercountry redistribution if income.

Although the price of oil under a fee will rise above the foreign supply price by the amount of the fee, it will not be

Figure 3


P
S_d
S'_{d+m}
S_{d+m}
P1
E
P'_0
E'
a
b
c
d
P0
E0
e
P''_0
O
Q''_0
Q'_e
Q_e
Q_0
Q

higher than the free-trade foreign supply price by the entire amount of the fee.[15] Compared to the free-trade foreign supply price, Po, with a fee, U.S. consumers must pay an additional price of Po'Po per barrel of imported oil. This magnitude is the amount of the fee which is shifted forward to the U.S. consumers. On the other hand, the foreign supply price of crude oil falls by Po - P"o. This implies that foreign producers earn smaller revenues for their oil exports because, when foreign production takes place under increasing cost conditions, the reduction of their exports causes a decline in foreign production and thus unit costs would decline. The reduction in foreign supply price, PoP"o, represents that portion of the imposed fee which is borne by the foreign producers. The imposition of the fee raises the home price of the imported oil by less than the amount of the fee as foreign producers lower their prices in an attempt to maintain sales in the fee-imposing country. The U.S. hence finds that its terms-of-trade has improved if the price it pays foreign producers for oil imports decreases while the price it receives from foreigners for its exports remains the same.

As mentioned earlier, the revenue effect consists of revenue generated from domestic consumers (area c) and foreign producers (e). The foreign revenue effect represents a redistribution of income from foreign producers to the fee-imposing country as a result of the new terms of trade.

A country that is a major importer of a product, the U.S. in the case of crude oil, is in a favorable trade situation. It may be able to use an import fee in order to improve the terms-of-trade at which it trades and hence its national welfare. An import fee can improve the nation's welfare when the foreign revenue effect (area e) is greater than the deadweight loss of consumer surplus (areas b and d).

So far the discussions are limited to a fee imposed on imported crude oil. The imposition of a fee on oil derivatives as well as crude oil has also been suggested in recent years. The imposition of a fee on oil and its derivatives may produce different economic effects. The discussions of this effective protection of a fee is beyond the scope of this paper.[17]

A fee imposed to drive down the foreign price of oil, as discussed above, results in a gain for the U.S. at the expense of foreign exporters. This type of policy is therefore not recommended as a general approach to normal trade relations. The arguments for departing from the general rule of free trade and treating oil as a special case has been discussed. However, it is important to recognize that the imposition of the fee may cause an adverse reaction in the oil-exporting countries.

The oil-exporting countries, and in particular OPEC, may retaliate, if the exporters agree to cut production in an effort to raise the world price as shown in figure 4.[16] The impact of retaliation is is at point E, the intersection of demand and supply, Dd and Sd+m. An import fee imposed raises the price to P'o to the U.S. consumers and reduces to P"o to foreign exporters. The reduction in the foreign producers' price, and the revenue generated by the U.S. government, provide the impetus to exporters to retaliate by restricting output. Suppose the export restriction, in effect just enough to raise the price to compensate for the import fee, reduces the supply of oil in the U.S., shifting the supply curve from Sd + w to S"d+m. The reduction in the U.S. supply raise the price of oil to U.S. consumers to P'1 and the price paid to imported oil to P1.

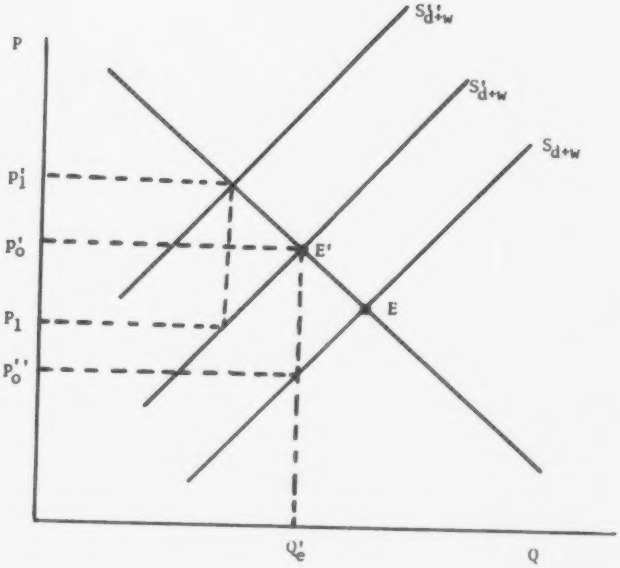
--INSERT FIGURE 4--

The final outcome will depend on what happens to the import fee. Since we assumed the price of U.S. oil will remain at a fixed level, the increase in the price of the foreign oil will automatically lead to the reduction of the import fee by that amount.

The magnitude of retaliation will most likely depend on the size of the import fee. Other things considered, it is reasonable to expect that the probability of retaliation will increase with the size of the fee. It was also shown that the discrepancy between the social and private costs of imported oil increases as the volume of imports increases. A balance must, therefore, be struck in order to equate the increasing benefit of a larger fee with the increasing cost of the greater possibility of retaliation.

Alternatively, and less costly to the society than the variable fee are subsidies in the form of cash disbursements, tax exemptions and deductions, and other special preferential treatments to domestic producers of oil. Subsidies are superior to the proposed fee for two reasons. First, subsidies will not result in the loss of consumer surplus since consumers would continue to enjoy the world's low price of oil. Secondly,

Figure 4


$S''_{d+w}$
$S'_{d+w}$
$S_{d+w}$
P
$P'_1$
$P'_o$
E'
$P_1$
E
$P''_o$
$Q'_e$
Q

subsidies require periodic appropriations, and thus are subject to a periodic review of their merit to the society.

Subsidies are, however, not without some problems. For example, subsidies are often financed from the general revenue and thus cause a redistribution of income from the taxpayers specifically to those consumers of the subsidized product. The redistribution of income tends to be smaller if all the taxpayers are the consumers of the subsidized product of roughly equal amount.

## CONCLUDING REMARKS

This paper examined the economic effects of a variable fee on imported oil. The discussion centered upon the terms-of-trade effect, whereby a country may gain by exercising its monopsonist power to affect the world oil price. Under this special case, a fee may produce a net gain to the imposing country by equalizing the private and social costs of imported oil. This is accomplished as a fee serves the dual function of taxing oil consumption and subsidizing domestic oil production.

While government intervention in the oil market may be justified, it is also important to recognize possible negative effects. A fee, in general, tends to reduce efficiency in resource allocation and cause the redistribution of income among countries and within countries between producers and consumers. There is also the possibility of retaliatory actions by oil exporting countries. It is also recognized that alternatives to the proposed fee include subsidies to domestic producers.

## Table 1A

### Crude Oil Production for Major Petroleum Producing Countries

(Thousands barrels per day)

| Year | Algeria | Iraq | Kuwait[1] | Libya | Qatar | Saudi Arabia[1] | United Arab Emirates | Arab Members of OPEC[2] | Indonesia | Iran | Nigeria | Venezuela | Total OPEC[3] | Canada | Mexico | United Kingdom | United States | China | USSR | Other[4] | Wor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1973 | 1,097 | 2,018 | 3,020 | 2,175 | 570 | 7,596 | 1,533 | 18,009 | 1,339 | 5,861 | 2,054 | 3,366 | 30,989 | 1,800 | 465 | 2 | 9,208 | 1,090 | 8,465 | 3,655 | 55,6 |
| 1974 | 1,009 | 1,971 | 2,546 | 1,521 | 518 | 8,480 | 1,679 | 17,724 | 1,375 | 6,022 | 2,255 | 2,976 | 30,729 | 1,684 | 571 | 2 | 8,774 | 1,315 | 9,000 | 3,777 | 55,8 |
| 1975 | 983 | 2,262 | 2,084 | 1,480 | 438 | 7,075 | 1,664 | 15,986 | 1,307 | 5,350 | 1,783 | 2,346 | 27,155 | 1,439 | 705 | 12 | 8,375 | 1,490 | 9,625 | 4,079 | 52,8 |
| 1976 | 1,075 | 2,415 | 2,145 | 1,933 | 497 | 8,577 | 1,936 | 18,578 | 1,504 | 5,883 | 2,067 | 2,294 | 30,738 | 1,295 | 831 | 245 | 8,132 | 1,670 | 10,143 | 4,258 | 57,3 |
| 1977 | 1,152 | 2,348 | 1,969 | 2,063 | 445 | 9,245 | 1,999 | 19,221 | 1,686 | 5,663 | 2,085 | 2,238 | 31,298 | 1,320 | 981 | 768 | 8,245 | 1,874 | 10,682 | 4,517 | 59,61 |
| 1978 | 1,161 | 2,563 | 2,131 | 1,983 | 487 | 8,301 | 1,831 | 18,457 | 1,635 | 5,242 | 1,897 | 2,166 | 29,805 | 1,313 | 1,209 | 1,082 | 8,707 | 2,082 | 11,185 | 4,674 | 60,0 |
| 1979 | 1,154 | 3,477 | 2,500 | 2,092 | 508 | 9,532 | 1,831 | 21,094 | 1,591 | 3,168 | 2,302 | 2,356 | 30,928 | 1,496 | 1,461 | 1,568 | 8,552 | 2,122 | 11,460 | 4,948 | 62,5 |
| 1980 | 1,012 | 2,514 | 1,656 | 1,787 | 472 | 9,900 | 1,709 | 19,050 | 1,577 | 1,662 | 2,055 | 2,168 | 26,891 | 1,435 | 1,936 | 1,622 | 8,597 | 2,114 | 11,773 | 5,170 | 59,5 |
| 1981 | 805 | 1,000 | 1,125 | 1,140 | 405 | 9,815 | 1,474 | 15,766 | 1,605 | 1,380 | 1,433 | 2,102 | 22,646 | 1,285 | 2,313 | 1,811 | 8,572 | 2,012 | 11,909 | 5,352 | 55,9 |
| 1982 | 710 | 1,012 | 823 | 1,150 | 330 | 6,483 | 1,250 | 11,758 | 1,339 | 2,214 | 1,295 | 1,895 | 18,868 | 1,372 | 2,748 | 2,065 | 8,649 | 2,045 | 12,080 | 5,631 | 53,6 |
| 1983 | 675 | 1,005 | 1,064 | 1,076 | 295 | 5,086 | 1,147 | 10,348 | 1,385 | 2,426 | 1,241 | 1,768 | 17,562 | 1,430 | 2,686 | 2,291 | 8,658 | 2,120 | 12,036 | 6,150 | 52,91 |
| 1984 | 630 | 1,192 | 1,163 | 1,107 | 395 | 4904 | 1,158 | 10,563 | 1,455 | 2,150 | 1,309 | 1,820 | 17,717 | 1,611 | 2,761 | 2,442 | 8,733 | [illegible] | [illegible] | 6,695 | 53,8 |

[1] Includes about one-half of the production in the former Kuwait-Saudi Arabia Neutral Zone. In September 1984, total production in this region amounted to approximately 380,000 barrels per day.

[2] Arab members of the Organization of Petroleum Exporting Countires (OPEC) include Algeria, Iraq, Kuwait, Libya, Qatar, Saudi Arabia, and the United Arab Emirates.

[3] OPEC total includes production in Algeria, Iraq, Kuwait, Libya, Qatar, Saudi Arabia, United Arab Emirates, Indonesia Iran, Nigeria, Venezuela, Equador, and Gabon.

[4] Other is a calculated total derived from the difference between world production and the nations represented above.

Notes: *U.S. geographic coverage is the 50 states and the District of Columbia.
*Monthly data are often preliminary figures and may not average to the annual totals because of rounding or because updates to the preliminary monthly data are not available.

Source: Energy Information Administration DOE, Monthly Energy Review, September 1984, pp. 108-109.

## Table 2A

### CRUDE OIL and PETROLEUM PRODUCT IMPORTS

| | Imports from OPEC Sources[1] | | | | | | | | | | | | Imports from Non-OPEC Sources[4] | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Algeria | Libya | Saudi Arabia | United Arab Emirates | Indonesia | Iran | Nigeria | Venezuela | Other OPEC[2] | Total OPEC | Total Arab OPEC[3] | Bahamas | Canada | Mexico | Netherlands Antilles | Trinidad and Tobago | United Kingdom | Puerto Rico | Virgin Islands | Other Non-OPEC | Total Non-OPEC | Total Imports |
| 1973 | 136 | 164 | 486 | 71 | 213 | 223 | 459 | 1,135 | 106 | 2,993 | 915 | 174 | 1,325 | 16 | 585 | 255 | 15 | 99 | 329 | 465 | 3,263 | 6,256 |
| 1974 | 190 | 6 | 461 | 74 | 300 | 469 | 713 | 979 | 88 | 3,280 | 752 | 164 | 1,070 | 8 | 511 | 251 | 8 | 90 | 391 | 339 | 2,832 | 6,112 |
| 1975 | 282 | 232 | 715 | 117 | 390 | 280 | 762 | 702 | 122 | 3,601 | 1,383 | 152 | 846 | 71 | 332 | 242 | 14 | 90 | 406 | [illegible] | 2,456 | 6,056 |
| 1976 | 432 | 453 | 1,230 | 236 | 539 | 298 | 1,025 | 700 | 134 | 5,066 | 2,424 | 118 | 599 | 87 | 275 | 276 | 31 | 88 | 422 | 353 | 2,247 | 7,313 |
| 1977 | 559 | 723 | 1,380 | 335 | 541 | 535 | 1,163 | 690 | 287 | 6,193 | 3,185 | 171 | 517 | 179 | 211 | 289 | 126 | 103 | 464 | 530 | 2,614 | 8,807 |
| 1978 | 649 | 656 | 1,144 | 385 | 573 | 555 | 919 | 645 | 226 | 5,751 | 2,963 | 160 | 467 | 318 | 229 | 253 | 180 | 94 | 429 | 483 | 2,613 | 8,363 |
| 1979 | 636 | 658 | 1,356 | 281 | 420 | 304 | 1,080 | 690 | 212 | 5,637 | 3,056 | 167 | 538 | 439 | 231 | 199 | 202 | 92 | 431 | 558 | 2,819 | 8,456 |
| 1980 | 488 | 556 | 1,261 | 172 | 348 | 9 | 857 | 481 | 130 | 4,300 | 2,551 | 78 | 455 | 533 | 225 | 176 | 176 | 88 | 388 | 491 | 2,609 | 6,909 |
| 1981 | 311 | 319 | 1,129 | 81 | 366 | 0 | 620 | 406 | 90 | 3,323 | 1,848 | 74 | 447 | 522 | 197 | 133 | 375 | 62 | 327 | 536 | 2,672 | 5,996 |
| 1982 | 170 | 26 | 552 | 92 | 248 | 35 | 516 | 412 | 97 | 2,146 | 854 | 65 | 482 | 685 | 175 | 112 | 456 | 50 | 316 | 627 | 2,968 | 5,113 |
| 1983 | 240 | 0 | 337 | 30 | 338 | 48 | 302 | 422 | 164 | 1,862 | 632 | 125 | 547 | 826 | 189 | 96 | 382 | 69 | 282 | [illegible] | 3,189 | 5,051 |
| 1984* | 331 | 0 | 367 | 107 | 338 | 8 | 225 | 346 | 161 | 2,062 | 832 | 87 | 623 | 737 | 191 | 92 | 387 | 91 | 331 | 546 | 3,352 | 5,414 |

Notes:

[1] Excludes petroleum imported into the United States directly from OPEC countries, primarily from Caribbean and West European areas as refined petroleum products that were refined from crude oil produced in OPEC countries.

[2] Includes Ecuador, Gabon, Iraq, Kuwait, and Qatar

[3] Includes Algeria, Libya, Saudi Arabia, United Arab Emirates, Iraqu, Kuwait, and Qatar

[4] Includes petroleum imported into the United States indirectly from OPEC countries, primarily from Caribbean and West European areas as refined petroleum products that were refined from crude oil produced in OPEC countries.

[5] Geographic coverage is the 50 States and the District of Columbia * Totals may not equal sum of components due to independent rounding.
*Beginning in October 1977, Strategic Petroleum Reserve imports are included.

Source: Energy Information Administration DOE, Monthly Energy Review, September 1984, pp. 46-47.

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## NOTES

[1] Bryan Burrow and Matt Moffett, "Petroleum Pinch: Many Small Oil Firms Are Squeezed to Limit By Falling Circle's Price," The Wall Street Journal, August 9, 1985, p. 1.

[2] Some observers argue the inevitable end to the OPEC cartel. See, for example, "OPEC Obituary," The Public Interest, Winter 1982, 3, pp. 1-24.

[3] The supporters of a fee on imported oil include, for example, S. Fred Singer, "If Oil Price Dives, Leap In With Fee," Wall Street Journal, January 18, 1985, p. 22, William Safire, "Hit OPEC While It's Down," The Dallas Morning News January 7, 1985, p. 3, and George Horwich and David Leo Weimer, "The Next Oil Shock - Giving the Market a Chance," Regulation March/April 1984, pp. 16-24. The opposing view may be, for example, represented by Charles W. Kadlec and Arthur B. Laffer, "Oil Levies Were A Bad Idea, Anyway," The Wall Street Journal, July 30, 1985, p.28.

[4] For international trade theory, see, for example, Peter H. Lindert and Charles P. Kindleberger, International Economics (Homewood, IL; Richard D. Irwin, Inc., 1982).

[5] A discussion of the Laffer curve can be found in Thomas J. Hailstones, A Guide To Supply-Side Economics (Richmond, VA, 1982), pp. 115-120.

[6] The terms-of-trade or optimum tariff, argument can be found in any standard textbook on international trade. For example, see Peter H. Lindert and Charles P. Kindleberger, International Economics (Homewood, IL, Richard D. Irwin, Inc., 1982), Ch. 7.

[7] This was pointed out by Douglas R. Bohi and W. David Montgomery, Oil Prices, Energy Security and Import Policy (Washington, D.C.: Resources for the Future, Inc., 1982), p. 8.

[8] The strict definition of predatory pricing, setting price below costs to drive a rival producer, may not apply because of a substantial price advantage of some OPEC members. Nonetheless, a substantial reduction in the price through market manipulation by OPEC may produce a similar result.

[9] For the historical review of OPEC, see Albert L. Danielson, The Evolution of OPEC (New York: Harcourt Brace Jovanovich, Publishers, 1982).

[10] A similar proposal was made by S. Fred Singer, "If Oil Price Dives, Leap In With Fee," The Wall Street Journal, January 18, 1985.

[11] James M. Henderson and Richard E. Quandt, Microeconomic Theory (New York: McGraw-Hill Book Co., 1980), Ch. 4.

[12] A more detailed analysis was made by Douglas R. Bohi and W. David Montgomery, Oil Prices, Energy Security and Import Policy (Washington, D.C.: Resources for the Future, Inc., 1982), Ch. 2.

[13] Ibid.

[14] The effect of a tariff is found in most standard textbooks on international trade. For example, see peter H. Lindert and Charles P. Kindleberger, International Economics (Homewood, IL: Richard D. Irwin, Inc., 1982), Ch 6 and 7.

[15] The general argument here follows that of Robert J. Carbaugh International Economics (Winthrop Publishers, Inc., 1980), Ch. 5.

[16] For a more detailed discussion on this issue, see Douglas R. Bohi and W. David Montgomery, Oil Prices, Energy Security, and Import Policy (Washington, D.C.: Resources for the Future, Inc., 1982), Ch. 2.

[17] For the discussions of effective protection, see Herbert G. Grubel, International Economics (Homewood, IL., Richard D. Irwin, Inc., 1981), Ch. 7.

# Statement of the Chamber of Commerce of the United States

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ON: AN OIL IMPORT TAX

TO: SENATE COMMITTEE ON ENERGY AND NATURAL RESOURCES

BY: SUSAN L. CONNOLLY

DATE: MARCH 20, 1986

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[illegible]

The Chamber of Commerce of the United States is the world's largest federation of business companies and associations and is the principal spokesman for the American business community. It represents almost 180,000 businesses plus several thousand organizations, such as local/state chambers of commerce and trade/professional associations.

More than 91 percent of the Chamber's members are small business firms with fewer than 100 employees, 57 percent with fewer than 10 employees. Yet, virtually all of the nation's largest companies are also active members. We are particularly cognizant of the problems of smaller businesses, as well as issues facing the business community at large.

Besides representing a cross section of the American business community in terms of number of employees, the Chamber represents a wide management spectrum by type of business and location. Each major classification of American business--manufacturing, retailing, services, construction, wholesaling, and finance--numbers more than 12,000 members. Yet no one group constitutes as much as 29 percent of the total membership. Further, the Chamber has substantial membership in all 50 states.

The Chamber's international reach is substantial as well. It believes that global interdependence provides an opportunity, not a threat. In addition to the 56 American Chambers of Commerce Abroad, an increasing number of members are engaged in the export and import of both goods and services and have ongoing investment activities. The Chamber favors strengthened international competitiveness and opposes artificial U.S. and foreign barriers to international business.

Positions on national issues are developed by a cross section of its members serving on committees, subcommittees and task forces. Currently, some 1,800 business people participate in this process.

# STATEMENT
on
# AN OIL IMPORT TAX
for submission to the
SENATE COMMITTEE ON ENERGY AND NATURAL RESOURCES
by
Susan L. Connolly*
March 20, 1986

The U.S. Chamber of Commerce is pleased to have the opportunity to comment as the Committee considers the issue of a tax on imported oil.

The Chamber strongly opposes any new energy production or use taxes, including an oil import fee or increased federal tax on gasoline. This position has been reviewed twice by the Chamber's Board of Directors during the past four months. Each time the Board voted to oppose such taxes.

It urges opposition to such legislation as S. 1997, introduced by Senators Wallop and Bentsen, to establish a $22 per barrel floor price for the imposition of a tax on imported oil; S. 1507, introduced by Senator Boren, to levy a $5 per barrel tax on imported crude oil and a $10 per barrel tax on refined petroleum products; and any other energy tax proposals offered as a means of reducing the federal deficit, keeping the tax reform bill "revenue neutral," shoring up the price of domestic oil, promoting energy independence, or other purposes.

The Chamber believes an oil import fee would deny Americans much of the economic benefit resulting from declining oil prices. While an oil import tax would raise revenues, we caution that the actual revenues to the federal Treasury would be less than the static revenue estimates indicate. Further, an oil import tax would be discriminatory and regressive, hurt the overall economy, create competitive imbalances, and penalize our allies. Our reasons for these conclusions are elaborated in the following three sections.

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*Manager, Energy and Natural Resources Policy, Resources Policy Department

## (1) Economic Benefits of an Oil Price Decline

Econometric studies generally agree that a decline in the price of oil would have a positive effect on our nation's economy by lowering inflation and interest rates and, thus, spuring economic growth and reducing unemployment.

Chamber economists examined the probable effects of an arbitrary $10 per barrel drop in oil prices. The results are listed in Table 1. Generally, they found it would provide the following benefits to the American economy:

A Drop in Oil Prices Raises GNP and Lowers Inflation. A sustained $10 per barrel drop in oil prices would raise the level of real GNP by 0.8 percent in the first year and 1.6 percent in the second year compared to what otherwise would have been the case. (See Figure 1.) In terms of growth rates, this means that a $10 per barrel decline in the price of oil would add 1.2 percentage points to real GNP growth in the first year and 1.0 percentage points in the second.

As a result of recent oil price decreases, we can expect real GNP to be 1.2 percentage points higher in 1986 and 1.0 percentage point higher in 1987 than would otherwise have been the case. Using the December 1985* Blue Chip consensus forecast of 2.5 percent growth in 1986 and 3.1 percent growth in 1987 as a starting point, this means that on the basis of the oil price decline that has already occurred, we can expect real GNP growth to be 3.7 percent this year and 4.1 percent in 1987.

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*The rationale for using the December 1985 consensus forecast rather than the latest one is that the former probably did not anticipate as rapid a decline in oil prices as has actually occurred.

The drop in oil prices would lower inflation. A $10 per barrel decline in oil prices would lower the rate of growth of the consumer price index by 1.1 percentage points in the first year. Any fall in oil prices is particularly good news to consumers as it cuts their energy bills.

Reduced Inflation Leads to Lower Interest Rates. Lower inflation rates are expected to lead to lower interest rates in 1986 and 1987. A $10 per barrel drop in oil prices should lower the rate on three-month Treasury bills by 30 basis points in 1986 and 20 basis points in 1987.

Lower Energy Costs and Lower Interest Rates Spur Investment. Lower energy costs and lower interest rates improve the outlook for both residential and nonresidential investment. A sustained $10 per barrel drop in oil prices should have the following effects: In 1986 and 1987, the level of nonresidential investment would be 1.3 percent and 3.0 percent higher, respectively, than otherwise would have been the case. Similarly, residential investment would be 2.1 percent higher in 1986 and 4.1 percent higher in 1987.

Increased Investment Creates More Jobs. Increased investment creates more private-sector jobs. As a result, civilian employment should be 0.4 percent higher in 1986 and 0.9 percent higher in 1987, than otherwise would have been the case. (See Figure 2.)

Lower Prices and Increased Employment Stimulate Consumer Spending. Lower prices and increased employment will raise real disposable income and consumer purchasing power. As a result, consumer spending will increase.

Chamber economists predict that the combination of stronger income growth and lower interest rates would reduce the budget deficit by a cumulative $20 billion over two years.

### (2) Negative Effects on the Economy from an Oil Import Tax

Chamber economists also examined the economic impact of an oil import tax on the national economy. A simulation was performed by the consulting firm of Laurence H. Meyer & Associates (Table 2) based on an arbitrary $5 per barrel import tax. The static revenue increase from the tax is estimated to be $10.1 billion in 1986 and $10.8 billion in 1987. It is assumed that the Federal Reserve will realize that the rise in inflation is due to the import tax and not an upward trend in prices and, thus, provide additional reserves to maintain interest rates at approximately the same level as the base case. If the Federal Reserve did not accommodate the new tax, however, the negative effect on the economy, particularly on investment, would be larger.

The results of the simulation show that enactment of an import tax would lower overall economic activity and significantly increase inflation, partially offsetting the gains to the nation's economy stemming from the recent slide in oil prices. We believe these results offer compelling arguments against the imposition of an oil import tax.

*An Oil Import Tax Lowers Real GNP, Increases Inflation and Lowers Consumer Spending*. The level of real GNP would be 0.2 percent lower in 1986 (or $8 billion) and 0.5 percent lower in 1987 (or $17.3 billion) than otherwise would have been the case. This means that the *rate of growth* of real GNP would be 0.2 percentage points lower each year. (See Figure 3.) As a consequence of reduced economic activity and higher prices, real consumer spending would be 0.2 percent lower in 1986 (or $5.8 billion) and 0.4 percent lower in 1987 (or $10.5 billion) than otherwise would have been the case. Residential and nonresidential fixed investment would also suffer. Real nonresidential investment would fall 0.3 percent in 1986 (or $1.5 billion) and 0.7 percent in 1987 (or $3.7 billion). Real residential investment would fall by similar percentages.

Lower Investment Means Fewer Jobs Created. Lower investment means that fewer private-sector jobs are created. As a result, the oil import tax would cause civilian employment to fall by 0.1 percent and 0.3 percent in 1986 and 1987, respectively, compared to what would have been the case without the added tax. This implies a cumulative loss of 400,000 jobs in 1986 and 1987. The civilian unemployment rate would be 0.1 percentage point higher in 1986 and 0.2 percentage point higher in 1987. (See Figure 4.)

A new tax would reduce the size of the National Income Accounts (NIA) deficit. However, the dynamic reduction ($17.9 billion over the two years) is $3 billion less than the static revenue estimate ($20.9 billion over the two years). The deficit is not reduced as much as expected because lower levels of economic activity and higher unemployment raise federal expenditures and lower receipts. On the other hand, the increase in inflation that would result from the tax would offset part of the reduction in government receipts that would occur due to lower levels of economic activity.

## (3) Additional Arguments Against an Oil Import Tax

In addition to the serious negative economic impact an oil import tax would have on the economy, an oil import tax should be opposed for the following important reasons:

--An oil import tax is not consistent with the U.S. policy of free trade. A sizeable portion of U.S. oil imports comes from neighbors and allies, such as Mexico, Canada, and the United Kingdom. A fee would harm them and might encourage retaliatory action.

--An oil import tax would lead to higher prices for all forms of energy: natural gas, coal, and electricity. The price of domestically produced oil would be bid up to the price of imported oil, including the fee, and the prices of other energy sources also would rise.

--An oil import tax would mean higher energy prices, which would increase domestic manufacturing costs, making it even more difficult for U.S. industries to compete overseas and at home. Foreign producers would retain their lower energy costs and be able to undercut American goods in the U.S. market. American exports would suffer and imports surge. Industries especially affected by an oil import tax would be basic metals, metalworking, machinery manufacturing, chemicals, agriculture, motor vehicles, and transportation.

--An oil import tax is regressive and would most severely penalize middle- and low-income consumers who spend a greater percentage of their income on transportation, food, utility bills, and other necessities.

--An oil import tax discriminates against regions of the country where automobiles are a necessity of life and where fuel oil is the prime source of home heating fuel.

--Foreign countries, some refiners, and certain consumer groups will undoubtedly seek exemptions from the tax. Such exemptions would lead to new bureaucratic entitlement programs that would offset much of the revenue the tax was supposed to raise.

--Consumers who suffered the skyrocketing energy prices during the 1970s as a result of excessive costs of cartel-controlled prices should not be required to support the price of domestic oil and indirectly other fuels for the benefit of a handful of those who benefited during the 1970s.

## Conclusion

The Chamber believes that, while actions to protect the economy and national security against an overdependence on foreign-produced energy could warrant federal intervention in the marketplace, such intrusion is *not* warranted at this time and would be counterproductive to the economy. In addition, we believe that if and when a time arises that national security is threatened, an oil import fee would not be the appropriate solution.

Attempts to solve the budget deficit by requiring Americans to pay more taxes also are unwarranted. Instead, we urge Congress to work to reduce the growth in federal spending.

## ECONOMIC IMPACT OF A $10 PER BARREL DROP IN THE PRICE OF IMPORTED OIL

(Percentage difference from base unless otherwise indicated.)

| | 1986 | 1987 |
|---|---|---|
| GNP | 0.5 | 0.8 |
| Real GNP | 0.8 | 1.6 |
| Consumption | 0.8 | 1.4 |
| Nonresidental Investment | 1.3 | 3.0 |
| Residential Investment | 2.1 | 4.1 |
| Civilian Employment | 0.4 | 0.9 |
| Consumer Prices (1) | -1.1 | -0.3 |
| Implicit GNP Deflator (1) | -0.4 | -0.4 |
| 3-Month Treasury-Bill Rate (2) | -30.0 | -20.0 |
| Corporate Bond Rate (2) | -10.0 | -20.0 |

Note: The base simulation is the current Laurence H. Meyer and Associates (LHM&A) forecast (BASE601). The price of OPEC oil is $20 per barrel in both 1986 and 1987. The alternative simulation assumes that OPEC oil averages $10 per barrel in both 1986 and 1987.

(1) Percentage point difference.
(2) Basis point difference.

Source: U.S. Chamber of Commerce, Forecasting Section, using the Washington University (LHM&A) model of the U.S. economy.

February, 1986

Table 2

ECONOMIC IMPACT OF A $5 PER BARREL
OIL IMPORT FEE

(Percentage difference from base unless otherwise indicated.)

| | 1986 | 1987 |
|---|---|---|
| Real GNP | -0.2 | -0.5 |
| Consumption | -0.2 | -0.4 |
| Nonresidental Investment | -0.3 | -0.7 |
| Residential Investment | -0.4 | -0.7 |
| Civilian Employment | -0.1 | -0.3 |
| Civilian Unemployment Rate (1) | +0.1 | +0.2 |
| Consumer Prices (1) | +0.6 | +0.2 |
| Implicit GNP Deflator (1) | +0.5 | +0.2 |

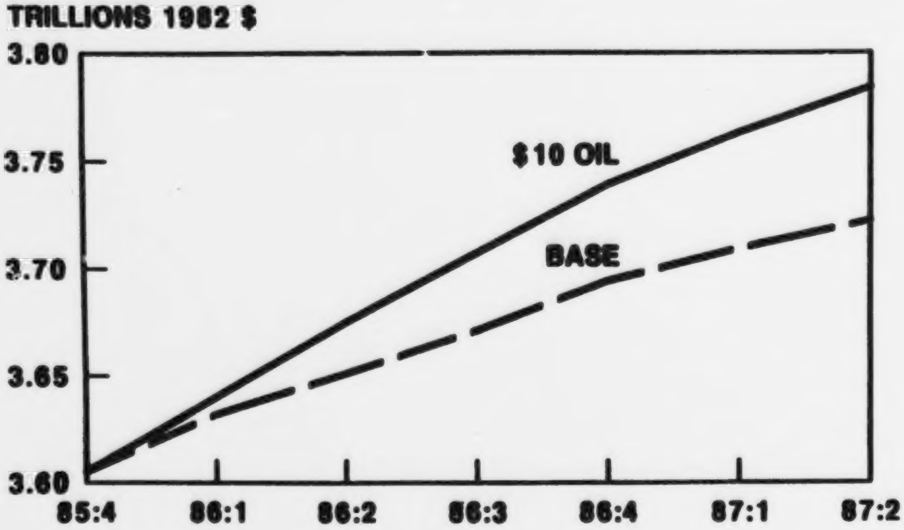
(1) Percentage point difference.

Source: Laurence H. Meyer and Associates, from a special analysis prepared for LHM&A clients.

February, 1986

Figure 1

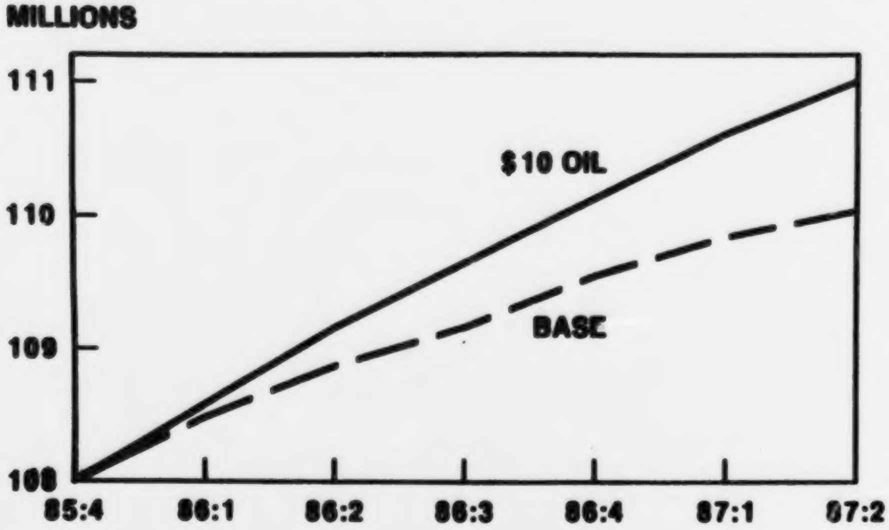
## IMPACT OF A $10 PER BARREL DROP IN OIL PRICES ON REAL GNP



Source: U.S. Chamber of Commerce
February, 1986

Figure 2

# IMPACT OF A $10 PER BARREL DROP IN OIL PRICES ON CIVILIAN EMPLOYMENT



Source: U.S. Chamber of Commerce
February, 1986

Figure 3

IMPACT OF A $5 PER BARREL IMPORT FEE ON GNP
BILLIONS 82$

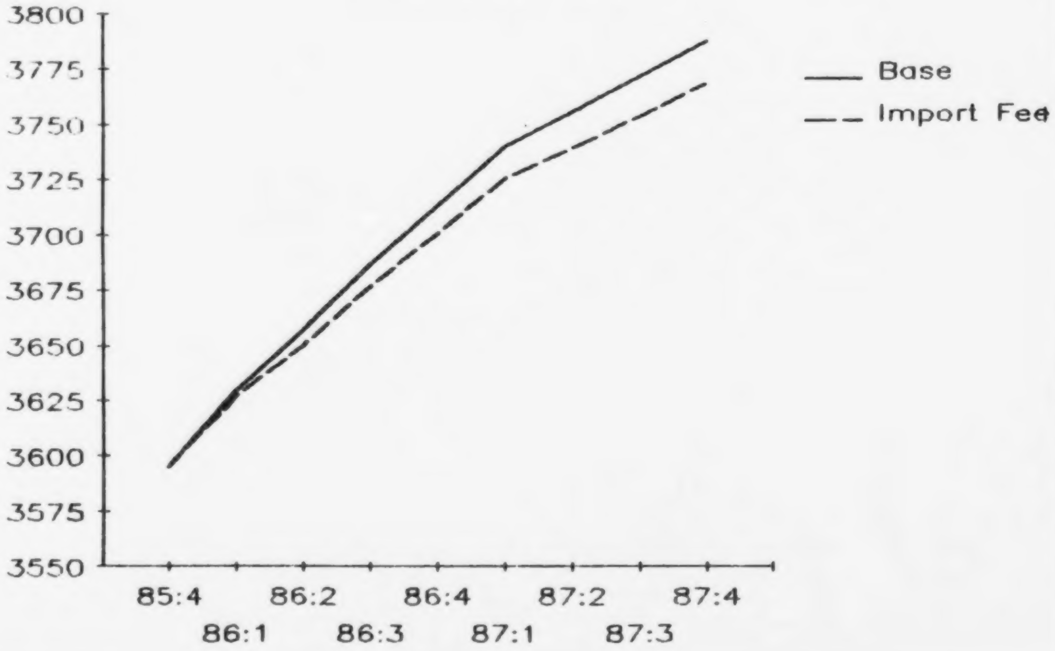


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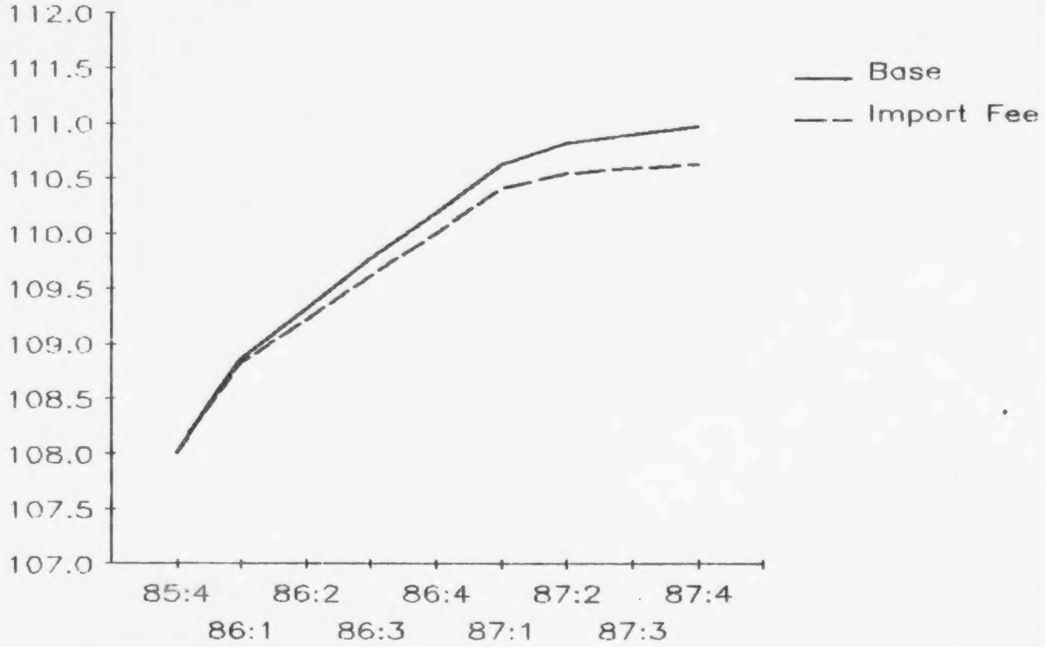
Figure 4

IMPACT OF A $5 PER BARREL IMPORT FEE ON EMPLOYMENT
MILLIONS



# Testimony
from the
National Asphalt Pavement Association
for submission to the
Senate Committee on Energy and Natural Resources

Senator James A. McClure, Chairman

Hearing Dates: March 20 and 25, 1986

Hearing Topic: Taxation of Imported Oil

[illegible]

The National Asphalt Pavement Association (NAPA) is the only national trade organization which specifically represents the Hot Mix Asphalt Industry. This Industry is responsible for producing and placing the material that surfaces approximately 93% of the nation's paved roads. The primary component of this product is asphalt cement, a petroleum by-product which is derived from both domestic and imported crude oils, as well as being imported as a finished product. We have, therefore, a considerable interest in any oil import fee proposals which may be under consideration.

As an organization, NAPA has a long history and policy of considering and supporting activities on the basis of whether they are, first and foremost, best for America; second, best for the Hot Mix Asphalt Industry; and third, best for the Association. It is our strong belief that a strong and healthy nation fosters the best environment for free enterprise as well as for business success. In line with this policy, NAPA has consistently supported reasonable proposals for reducing the federal deficit, and we appreciate the efforts of the committee in seeking these same ends.

In the consideration of an oil import fee, however, we would wish to draw to the committee's attention the impacts that such a fee could have on the nation's transportation and other public works systems and the agencies which are responsible for their construction and maintenance.

The primary use of the aforementioned asphalt cement is transportation oriented in the form of highways, roads, streets and airport run-ways.. Other applications include environmental facilities such as sanitary landfill liners, sewage ponds, water storage facilities and as facings for earth-filled dams, as well as for recreational resources such as bike paths, running tracks, tennis and basketball courts and playgrounds.

The majority of these facilities, as is readily apparent, are constructed for the public benefit under the aegis of governmental agencies on the federal, state and local level. In fact, more than 80% of all asphalt cement used each year in the United States is purchased by governmental entities for such public uses. Therefore, any action that has an impact upon the cost of the asphalt cement also has a direct impact upon the construction and maintenance of these facilities.

Due in part to the well publicized decline in the domestic refining industry, coupled with technical innovations which have increased the proportion of light products refined from each barrel of oil, adequate domestic supplies of asphalt cement have not been available to meet the nation's demands. Imports of finished asphalt cement constitute less than 1% of total refined product imports, while the proportion of imported crude oil converted into asphalt cement amounts to less than 3% of the nation's annual crude imports.

The point we would like to make is that an oil import fee would increase the cost of the most significant product used in the construction of pavements. Such an increase would have a number of readily foreseeable effects to which we would like to direct the committee's attention.

In light of the great concern which exists over the state of the nation's infrastructure, it would seem counter-productive to add to the already staggering costs to repair and rebuild many of these facilities by increasing construction costs through the imposition of a tax on a basic construction material.

As stated previously, the primary consumers of our product are governmental agencies, which finance their construction programs through tax revenues derived from user fees and fuel taxes. The imposition of an oil import fee on asphalt cement would create a tax on these tax revenues, reducing the amount of work which could be performed and negating much of the public benefit derived from highway construction and maintenance. We believe that the governmental agencies responsible for highway construction were looking forward to less expensive asphalt as a way of maintaining highway programs in the face of budgetary cut-backs and reductions.

Any significant import fee would also have the effect of not only reducing the demand for the product, but would also have ramifications in lowering construction industry employment.

It should also be noted that the bidding for, and the letting of, construction contracts frequently occurs as much as two years in advance of actual construction, while the price of petroleum products delivered to contract sites are priced as per the actual date of delivery. It is therefore, extremely difficult for the private contractors to forecast their costs and thereby submit competitive bids unless there is stability in the market. Congressional consideration of oil import fees has already caused consternation in the industry concerning future oil and asphalt prices and could lead to a chilling in highway contract bidding which will be felt for several years to come.

In 1975, in the face of rapidly increasing oil prices, many state and local agencies enacted price adjustment clauses to give some protection to long-term contracts where significant increases in material costs were incurred pursuant to the date of bidding. Few of these agencies still maintain these clauses and if Congress chooses to impose an oil import fee, some consideration will be needed for the provision of a similar means of protecting contracts which have been bid and let on the basis of current costs which may be lower than the costs which would result from Congressional mandates.

On the basis of these points, we would respectfully request that the committee contemplate the exemption of asphalt cements from any import fees, specifically, that proportion of the barrel of crude oil which is processed into asphalt cement and that proportion of petroleum product imports which are brought into this country in the form of finished asphalt cement.

We are well aware of the number of comments and amounts of input the committee has received on this issue and we have consciously attempted to keep our comments to a minimum. We would be happy to supply the committee with further details and documentation if they are desired.

PMAA
**PETROLEUM MARKETERS ASSOCIATION OF AMERICA**
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# STATEMENT OF THE PETROLEUM MARKETERS ASSOCIATION OF AMERICA

BEFORE THE

ENERGY AND NATURAL RESOURCES COMMITTEE
UNITED STATES SENATE

ON

# AN OIL IMPORT TAX

March 20, 1986

The Petroleum Marketers Association of America (PMAA), formerly the National Oil Jobbers Council (NOJC), is a federation of 41 state and regional associations representing some 11,000 independent marketers of a wide range of petroleum products including gasoline, home heating oil, and diesel fuel. Collectively, the marketers represented by PMAA sell approximately 50 percent of the gasoline and 80 percent of the home heating oil consumed in America. Although virtually all the marketers PMAA represents are small businessmen, their collective assets rank them 17th on Fortune 500's list of companies ranked by assets.

Together these businessmen directly employ over 239,000 persons and as local businessmen serve the energy needs of millions of ordinary Americans. This being the case, we are especially aware of the implications of various oil import tax proposals, which are now being considered.

Numerous reasons have been put forth in favor of an oil import tax. Among other reasons, it is seen as a means to strengthen national security. Others believe that it will weaken OPEC. Others believe it is necessary to protect our domestic production industry. Still others want the tax as a means of reducing the federal deficit. Finally some think it is the ideal source for the lost revenue from tax reform. This is a far cry from the days when Americans were told that rising oil prices were the purveyor of inflation, high interest rates, unemployment and a general reduction in our standard of living and Americans were being urged to conserve as a means of reducing America's dependence on foreign crude.

An oil import tax is bad energy policy, bad tax policy, bad economic policy, and certainly bad trade policy. If it were the panacea to the nation's ills as many would have us believe, it would have been enacted long ago. However, due to the overly simplistic appeal of an oil import tax it has become like the proverbial bad penny, always turning up as the solution to whatever problem exists.

## HISTORICAL PERSPECTIVE

One thing that history has taught us is that as oil prices move, so does the nation. When oil prices are rising, inflation and unemployment are on the increase and economic activity on the decline. When oil prices fall, inflation and unemployment decline, and economic activity grows. It has not been that long ago that history offered us the perfect example.

Beginning in 1973, the Arab oil embargo and subsequent monopolistic pricing by OPEC nations, sent prices of crude oil soaring. From 1973 to 1974 the price of oil imported to this country rose from $4.08 to $12.52 per barrel, an increase of over 300 percent. This came at a time when domestic production was at near record levels of 9.4 million barrels per day and imports of crude oil were 3.2 million barrels a day. Foreign crude oil prices began to drive domestic crude prices, and as can be seen from Table 1 oil prices continued their upward progression until 1981.

### TABLE 1
### US REFINER ACQUISITION COST OF CRUDE OIL
(dollars per barrel)

| Year(1) | Domestic | Imported | Composite |
|---|---|---|---|
| 1968 | 3.21 | 2.90 | 3.17 |
| 1969 | 3.37 | 2.80 | 3.29 |
| 1970 | 3.46 | 2.96 | 3.40 |
| 1971 | 3.68 | 3.17 | 3.60 |
| 1972 | 3.67 | 3.22 | 3.58 |
| 1973 | 4.17 | 4.08 | 4.15 |
| 1974 | 7.18 | 12.52 | 9.07 |
| 1975 | 8.39 | 13.93 | 10.38 |
| 1976 | 8.84 | 13.48 | 10.89 |
| 1977 | 9.55 | 14.53 | 11.96 |
| 1978 | 10.61 | 14.57 | 12.46 |
| 1979 | 14.27 | 21.67 | 17.72 |
| 1980 | 24.23 | 33.89 | 28.07 |
| 1981 | 34.33 | 37.05 | 35.24 |
| 1982 | 31.22 | 33.55 | 31.87 |
| 1983 | 28.87 | 29.30 | 28.99 |
| 1984 | 28.53 | 28.88 | 28.63 |
| 1985 | | | |

(1) Prices unavailable prior to 1968.
Source: U.S. Department of Energy: Annual Energy Review

As a result of this dramatic crude oil price spiral our economy suffered dramatically. Memories of the long gasoline lines, high unemployment and soaring inflation are not so distant that they can not be recalled. Interest rates close to twenty percent are a sad, but all too recent memory. Rapidly rising oil prices in an economy founded and growing on inexpensive energy sent shock waves throughout the economy, many of which are still being felt.

PMAA is well aware of the current arguments being advanced for an oil import tax. We still find them unpersuasive and would appreciate the opportunity to address each one individually.

## National Security and an Oil Import Tax

The argument that an oil import tax is needed as a means to ensure national security is not new. Oil is important to national security both in terms of its availability and its impact on economic activities. The proponents of an oil import tax from a national security perspective have argued that such a tax is necessary because: (1) it discourages consumption and thereby places less reliance upon unstable foreign, particularly OPEC, crude oil; (2) it raises domestic prices and encourages exploration for crude oil here, thereby reducing our future dependence upon foreign oil; and (3) it protects our nation against supply disruption by assuring an adequate supply in the United States.

Many of these arguments have been used before. But, history shows that artificial import restrictions did not have the desired effect.

The Eisenhower Administration imposed the Mandatory Oil Imports Program (MOIP) in 1959 which restricted the amount of foreign oil imported into this country. The result was to raise the domestic price of crude oil relative to the world price. Table 2 illustrates the impact of MOIP on the relative price of domestic and foreign crude oil.

TABLE 2
US REFINER ACQUISITION COST OF CRUDE OIL
(dollars per barrel)

| Year(1) | Domestic | Imported |
|---|---|---|
| 1968 | 3.21 | 2.90 |
| 1969 | 3.37 | 2.80 |
| 1970 | 3.46 | 2.96 |
| 1971 | 3.68 | 3.17 |
| 1972 | 3.67 | 3.22 |
| 1973 | 4.17 | 4.08 |

(1) prices unavailable prior to 1968
Source: U.S. Department of Energy: Annual Energy Review.

This policy encouraged the consumption of higher priced domestic oil when foreign oil was cheaper. Further, it resulted in the massive transfer of income from American citizens to domestic producers. It also resulted in lower exports and higher inflation and unemployment than would have occurred in the absence of the quotas.

In spite of the protection afforded domestic producers, the American economy was not sheltered during the 1973-74 and 1978-79 oil supply disruptions, when rising crude oil prices threatened our economic well being.

We know from experience that America is not oil self-sufficient. We must import part of our oil needs. That is a fact of life. Additionally, the level of imports is such that the price of imported oil determines domestic crude oil prices. Given that the bulk of U.S. onshore reserves have been discovered and offshore exploration is not projected to contribute significant amounts of crude oil reserves, imported prices will likely continue to determine domestic prices.

America has made a startling turnaround in its dependence of unstable foreign oil. U.S. dependence upon foreign oil peaked in 1977 when, according to the EIA, imports of crude oil constituted 45 percent of total crude oil supplied. Our dependence upon OPEC nations also peaked as they constituted 72.3 percent of net imports. Since that time we have become less dependent upon all foreign sources, and especially that from Arab-OPEC nations. Preliminary 1985 data show that crude oil imports accounted for only 26 percent of demand. Arab-OPEC countries accounted for only 8.7 percent of total petroleum imports while total OPEC imports were 35.5 percent of all imports.

The national security argument says that we must have in place the necessary domestic reserves and production capacity in the event of a national emergency and that under the current climate this can only be done by raising domestic prices. The argument continues that if oil prices continue to fall reserves will be shut in and domestic producers, who face higher production costs than Arab-OPEC nations, will stop producing. Additionally, it is argued that exploration will also fall as prices decline.

These arguments are only valid if the price of oil falls below U.S. production and exploration costs, and if the emergency occurs in the near future. The majority of domestic production costs are still well below the domestic price of oil. According to the EIA publication, "Performance Profiles of Major Energy Producers 1984", the domestic production cost for the major oil companies was $7.04 per barrel including production taxes and $3.80 per barrel after taxes. Petroleum discovery costs, according to this report, were $9.13 per barrel before taxes and $5.47 per barrel after taxes. The current price of oil is well above both the average exploration and production costs for the major oil companies. Table 3 presents the average finding and lifting costs and profit margins on oil production for these companies.

TABLE 3
BEFORE AND AFTER TAX REVENUE, COSTS, AND PROFIT MARGINS
FOR FRS COMPANIES, 1982-1984 (1984 DOLLARS PER BARREL)[a]

| Revenues and Costs | 1982 | 1983 | 1984 |
|---|---|---|---|
| Revenue[b] | | | |
| Before Tax . . . . . . . . . . | 14.14 | 22.88 | 22.36 |
| After Tax . . . . . . . . . . | 13.04 | 12.36 | 12.07 |
| Finding Costs[c] | | | |
| Before Tax . . . . . . . . . . | 14.75 | 10.65 | 9.13 |
| After Tax . . . . . . . . . . | 8.75 | 6.31 | 5.47 |
| Lifting Costs[d] | | | |
| Before Tax . . . . . . . . . . | 8.59 | 7.65 | 7.04 |
| After Tax . . . . . . . . . . | 4.64 | 4.13 | 3.80 |
| Profit Margin[e] | | | |
| Before Tax . . . . . . . . . . | 0.80 | 4.58 | 6.19 |
| After Tax . . . . . . . . . . | -0.32 | 1.92 | 2.80 |

[a] All dollar values converted to 1984 dollars using the implicit GNP price deflator.
[b] Value of reserve additions at current year prices. Oil price is average FRS company production sales price of crude oil and NGL. Gas price is price on new gas (NGPA categories 102, 103, 108, and 109) from Energy Information Administration, Natural Gas Monthly, DOE/EIA-0130(85/08) (Washington, DC, October 1985), page 12.
[c] Based on Table 41
[d] Includes production taxes
[e] Revenue less finding and lifting costs.

Source: Performance Profiles of Major Energy Producers - 1984

As can be seen from Table 3 inflation adjusted profit margins for oil production has been increasing (even though crude oil prices have been falling). In addition, both inflation adjusted production and exploration costs have been falling. Even now oil companies can still make a profit and will continue to explore for oil.

Some oil companies claim that falling oil prices reduce significantly the incentive to search for oil. There are many factors associated with the decision to search for oil, not the least of which are the questionable business judgements of those companies that have participated in the merger mania. It is, however, the expectation of long run oil price trends that is responsible for exploration, not short run oil price movements, and the long run trend is going to be rising oil prices.

In summary, there are three fatal flaws to the national security argument. The first is that it does not recognize that domestic prices are set by foreign prices and this can be a source of great economic disruption, as was seen during 1973-74 when foreign oil prices began to rise rapidly. The second flaw is the failure to recognize the long term implications of a short term solution. If, through an oil import tax, we encourage the consumption of domestic oil relative to that of foreign oil now, present consumption will be greater and future reserves smaller. This "drain American first" policy would mean that we would run the risk of not having enough reserves and production to meet a future emergency. The third fatal flaw is that proponents have ignored the changing import patterns. America now relies on our traditional allies for the bulk of our crude oil, not those nations which cut us off during 1973-74.

National security is more likely to be threatened by a weak economy brought about by domestic oil prices being higher than world oil prices. This is precisely what an oil import tax will do. However, that point will be addressed later.

Import Taxes and Energy Policy:

The idea of an oil import tax as an energy policy is seriously flawed. This nation took a path toward neutrality and reliance on market forces when domestic oil markets were decontrolled by President Reagan in 1981. From 1959 to 1981 the federal government regulated oil markets in such a way as to influence our consumptive patterns. During part of this period government policy raised domestic prices above world prices and encouraged the consumption of higher priced domestic oil, when cheaper alternatives existed. From 1973 to 1981, the Crude Oil Entitlements Program encouraged the consumption of foreign crude and the transfer of large sums of American wealth to OPEC nations.

As outlined in the last Presidential National Energy Policy Plan, the goal of our nation regarding energy should be to promote a "mixed and balanced" energy resource system, such that all fuels compete on their own merits. This means that government intervention should strive not to alter the relative prices of fuels. An import tax will do just that by increasing the price of oil relative to that of other fuels and by favoring domestic crude oil over foreign crude oil. The net result is an energy policy designed to promote inefficiency.

There are other ways the government can induce exploration and production of crude oil. PMAA believes that the federal and state governments should encourage domestic oil activity. It can be done by reducing severance taxes on crude oil, by extending the oil depletion allowance, and through increasing the intangible drilling credits. We could adopt a system similar to the one the United Kingdom uses in the North Sea. Under this system a well's production is not taxed until all the exploration and development costs have been recovered by the company. These are just a few of the ways our domestic oil industry can be helped without hurting America.

## TRADE POLICY

A number of the proponents of an oil import tax, see it as a trade policy that stimulates domestic output at the expense of other nations, and, at the same time, as a means of punishing OPEC for its past actions.

OPEC artifically raised the price of oil and now the argument goes that the U.S. can force it down below the levels it would normally attain without an import tax. This of course assumes that the incidence of the tax would fall partially or totally on the exporting country. Given the current state of world oil markets this is a plausible assumption.

It is true that an oil import tax would have to be absorbed to some degree by producing countries, and this would reduce OPEC revenues. However, OPEC is not the only group of countries from which we purchase crude oil. All nations exporting crude oil and refined products to this nation would be adversely impacted. Table 4 below presents U.S. imports by selected country or group of countries.

TABLE 4
IMPORTS OF CRUDE OIL AND REFINED PRODUCTS
BY SELECTED AREA OR COUNTRY
(000's BPD)

| | ARAB OPEC | CANADA | MEXICO | TOTAL NON OPEC | TOTAL IMPORTS |
|---|---|---|---|---|---|
| 1973 | 915 | 1,325 | 16 | 3,263 | 6,256 |
| 1974 | 752 | 1,070 | 8 | 2,832 | 6,112 |
| 1975 | 1,383 | 846 | 71 | 2,454 | 6,056 |
| 1976 | 2,424 | 599 | 87 | 2,247 | 7,313 |
| 1977 | 3,185 | 517 | 179 | 2,614 | 8,807 |
| 1978 | 2,963 | 467 | 318 | 2,613 | 8,363 |
| 1979 | 3,056 | 538 | 439 | 2,819 | 8,456 |
| 1980 | 2,551 | 455 | 533 | 2,609 | 6,909 |
| 1981 | 1,848 | 447 | 522 | 2,672 | 5,996 |
| 1982 | 854 | 482 | 685 | 2,968 | 5,113 |
| 1983 | 632 | 547 | 826 | 3,189 | 5,051 |
| 1984 | 819 | 630 | 748 | 3,388 | 5,381 |
| 1985 | 434 | 756 | 831 | 3,213 | 4,986 |

Source: November 1985 Monthly Energy Review

American hostility towards OPEC stems from the Arab embargo. It should be noted that Venezuela, founding member of OPEC, did not participate in the embargo. Venezuela was and is a loyal ally of America. Since Arab OPEC exports account for only about 9 percent of total imports a tax designed to hurt Arab OPEC nations or designed to lessen our dependence on those nations would certainly hurt many of our allies such as Mexico, Canada, the United Kingdom and others. An import fee applied unilaterally, will punish not only all nations but also the American banks which have lent those nations money. In the case of Mexico, this action would be disastrous to both Mexican and American banks.

For the reason that an unilateral import fee would punish American allies and banks, it has been proposed that the fee be restricted to specific countries. The immediate result would be a short term reduction in imports from affected countries. In the long run imports would shift from the affected countries to those countries not facing an import fee. This would have the impact of shifting the source of imports, but not seriously lessening our dependence on foreign sources of oil.

Moreover, exempting certain nations from an oil import tax could also have other negative effects. First, it will reduce substantially the level of revenue such a tax may generate. In fact, the revenue enhancement benefits of an import tax may be completely eroded if imports from those countries affected by a tax decline substantially and are replaced by imports from countries exempt from the tax.

Secondly, by exempting certain countries from the tax, domestic market distortions could occur leading the U.S. to the same position it was in during the 1970's including a reenactment of the entitlements program and the government regulatory bureaucracy that accompanied it.

## An Oil Import Tax as a Protectionist Measure:

In the last year approximately 300 bills have been introduced in Congress to impose quotas, tariffs or some other form of protectionism. This can also be seen in the oil industry as industry trade groups and unions seek to protect themselves from foreign competition. The arguments against protectionism are all too familiar and, therefore, need not be repeated here. However, it is important to note the costs of protectionism. Two recent studies measure the costs and benefits from the Voluntary Export Restraint program that limited Japanese auto exports to this country. These studies "indicate that the cost per one job saved in the U.S. auto industry was between $160,000 and $183,000 per year."

An oil import tax would also have two very important impacts on the American manufacturing community. First, it would result in fewer dollars being spent abroad and this would work on raising the value of the dollar overseas. A rising dollar makes it more difficult for American manufacturers to compete in foreign markets, a problem already costing numerous Americans their jobs. Secondly, an oil import tax raises the costs of manufacturing in America by raising the price of energy in this country relative to other countries' energy prices. This makes imports cheaper, as does a rising dollar, and this will displace American jobs and profits.

An import tax can do nothing but raise the cost of producing goods in this country. It can protect American jobs in the oil industries, but only at the cost of many more jobs throughout the remainder of the economy. It will hurt our allies, damage our banks and destroy an already weak manufacturing sector.

## Deficit Reduction and Tax Reform:

The last major source of support for an oil import fee comes from those seeing it as a source of revenue either to reduce the deficit or to offset other tax reductions which may be included in a revenue neutral tax reform bill.

Public concern over the large federal deficits has intensified with enactment to Gramm-Rudman-Hollings bill which mandates specific levels by which the federal deficit must be reduced. The recent decline in oil and associated refined product prices has spurred the desire of some lawmakers to seek to reduce the deficit by means of an oil import tax or gasoline excise tax increase.

There are factors which make an oil import tax an attractive source of new revenue. First, oil is a politically attractive target. Second, because oil prices are falling, it is believed that consumers and the economy will not notice the imposition of an import tax. Third, it is believed that the tax will help an ailing domestic oil industry and reduce our dependence upon foreign crude oil. Finally, it is believed that this is the best of other possible alternative means of reducing the deficit.

PMAA believes there are, however, numerous alternatives to an oil import tax as a means of reducing the deficit. Many of these are articulated in the President's budget proposal and center around reductions in federal spending. PMAA also believes that there are better alternatives to generating revenue than an oil import tax and we would be happy to discuss those if the Committee desires. However, to blindly call for an oil import tax without considering the macroeconomic impact of such a tax is ill advised.

First, declining oil prices actually reduce the federal deficit by lowering government outlays and increasing tax revenues. The Office of Management and Budget and the Congressional Budget Office first estimated the 1987 FY deficit to reach $200 billion; however, the impact of falling oil prices has caused them to reduce their estimates to between $178 and $182 billion. Falling oil prices since the beginning of 1986 have reduced the projected deficit by over $18 billion dollars. Projections of inflation and unemployment are also down and general economic activity increased.

Assuming that an oil import tax caused no ill side effects to the economy, it would require an import tax of $15.32 per barrel to raise this $18 billion. Things just are not that simple and an oil import fee will have serious, even disasterous effects on the economy.

## Economic Implications of An Oil Import Fee

We begin by assuming that the government wants to raise revenues through a crude oil import tax. For the purpose of analysis a $10 per barrel tax will be considered. Several current proposals call for a tax this high. (For the time being, the imposition of a refined product import fee will be avoided. This only serves to cloud the discussion. Imposition of such a product tax would raise the estimates of inflation and unemployment and lower the level of economic activity associated with an import tax.)

An import tax changes the relative cost of oil and of commodities using oil as an input. The short term result is higher prices for commodities manufactured using oil in some form and higher refined product prices. This means higher energy prices, gasoline prices and higher prices for such items as plastics and petrochemicals. Next, both business and consumers shift away from the higher priced oil to other commodities. There is a reduction in real income and this coupled with higher prices lower aggregate demand results in a suboptimal growth path of Gross National Product, employment and increases the rate of inflation.

It is also important to briefly explain the manner in which an oil import tax impacts the economy. The imposition of a $10 per barrel import tax, at current crude oil price levels would result in:

- An increase in the domestic crude oil price by $10 per barrel.
- An increased crude oil bill of $121.4 million per day.
- This increased price of imports forces down consumption of imports in the first year by approximately 578 thousand barrels per day or 211 million barrels per year.
- This reduces the federal import tax collection $2.1 billion dollars a year.
- This makes the nation's oil bill rise by $42 billion dollars in the first year of the tax. The federal government receives only about $9.6 billion per year, with the remainder of $32.4 billion being transferred from American consumers to American oil producers.
- Gasoline prices will rise almost 24 cents per gallon.
- Natural gas well head prices would rise by an equivalent amount.
- Employment will be reduced by over 400,00 jobs.

Other Arguments Against An Import Tax:

Putting aside all of these considerations, there are still other problems with an oil import tax. First, what is the appropriate level for oil prices to ensure adequate exploration and production. The price for domestic oil would need to be set at a level that would, given the risks such as dry holes, equate the rate of return in production to the risk adjusted rate of return in other industries. Any rate below that would reduce the amount of resource committed to the oil industry, thus reducing national security interests. Any rate higher than that would result in an inefficient use of society's resources and a larger shift of wealth from the non oil producing public to domestic oil producers. Additionally, such a tax would result in higher unemployment and inflation than would be necessary to induce oil exploration and production. This is indeed a formidable task.

Once having chosen the appropriate price of crude oil, one is faced with the task of finding the appropriate rate of growth in this price. Failure to do so would result in the aforementioned problems.

Having chosen both the correct crude oil price and the appropriate rate of growth, the policy maker is faced with having to chose the correct amount of tariff or tax to keep domestic prices at this level and to insure that they grow at the optimum rate. Again, one must know the future path of oil prices and the ability of exporting nations to shift the burden of the tax forward.

For example, assume that the optimum price for domestic crude oil is $10.00 per barrel, and that historically there has been a two dollar differential between domestic and foreign crude oil. This means that a tax must stabilize imported crude oil at $12.00 per barrel. If foreign crude is selling at $15.00, then a tax of three dollars may be enough to keep domestic prices at $12.00. This assumes that the exporting nation does not cut its prices in response to the import tax. If it does, then the price of imported oil will continue to decline and this will force domestic prices down. As can be seen the problems with establishing an oil import tax are quite large and may render this as an unattainable goal.

## SUMMARY

In summary, PMAA urges Congress to carefully consider all the implications of an oil import tax. We believe you will agree with us that is is bad energy policy, bad tax policy, bad trade policy and bad economic policy. We would be happy to provide the Committee with further information.

## MEMBERS OF THE PETROLEUM MARKETERS ASSOCIATION OF AMERICA

The Petroleum Marketers Association of America represents the independent petroleum marketers who are members of these state and regional trade associations:

Alabama Oilmen's Association
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The Petroleum Marketers Association of America is located at 1120 Vermont Avenue, N.W., Suite 1130, Washington, D.C. 20005. Telephone (202) 331-1198.

Testimony of

**Transco Energy Company**

Submitted to the

Committee on Energy and Natural Resources
United States Senate

on

March 20, 1986

## SUMMARY OF TESTIMONY

**TRANSCO ENERGY COMPANY SUPPORTS THE BILLS INTRODUCED BY SENATORS BOREN AND WALLOP TO IMPOSE VARIABLE IMPORT FEES ON IMPORTED CRUDE OIL AND PETROLEUM PRODUCTS, PROVIDED THAT SUCH FEES ARE LIMITED TO A 3-YEAR TRIAL PERIOD.**

**Recent experience indicates danger of over reliance on foreign supplies.**

- In 1977 almost one-half of requirements were imported.
- Supply interruptions and foreign imposed price increases have sent shock waves through our economy.
- National security is impossible without firm control over energy supplies, since our nation's defense runs on oil - not coal, natural gas or nuclear energy.
- Two-thirds of the free world's proved reserves are in the Middle East.

**Dependence on foreign supplies has been reduced during first half of 1980's.**

- Imports now fill only about one-third of needs, or about 5 million barrels per day.
- Reduction in imports was achieved through decontrol of domestic prices which increased the level of U.S. production.

**Precipitous price cuts threaten a roll-back of progress toward energy independence.**

- Low prices will not provide sufficient incentives to replace domestic reserves and production.
- U.S. rig count is already down by 70 percent since December, 1981, and by 28 percent since the start of 1986.
- DOE's Annual Energy Outlook, 1984 indicated that imports could reach the 61 percent level by 1995. This was based on a projected 1986 import price of $24 per barrel.
- As a primary marketer of energy to the Eastern Seaboard, we already see an increasing number of natural gas-displaced fuel oil transactions at price offerings described by our big boiler fuel customers as "whatever it takes." It is only reasonable to expect similar displacements of coal sales if present pricing trends continue.

**If domestic production is crippled, recovery will not come back quickly.**

- Time span from initial exploration to full scale production can be as long as five years.

**Import fees will not unfairly burden certain regions of the country.**

- Fees will only prevent precipitous price drops, and not cause increases.

- Fees will ensure that prices stabilize at a minimum survival value in the low twenties. The market may eventually reach the same point on its own, but why take that risk?

**Import fees have admittedly not had universal support even within the energy industry. But, if Congress is not inclined to tax foreign energy, why impose higher taxes on the domestic energy industry under H.R. 3838? I believe there is little, if any, dissent from the industry on that point.**

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Transco is a diversified energy concern headquartered in Houston, Texas. Our principal business operations include the purchase, transmission, and sale of natural gas in the Eastern United States; oil and gas exploration and production primarily in the Gulf Coast and Rocky Mountain areas; and the production and sale of coal in the East. So, one way or the other, our business energizes several of your home states.

The lesson of the 1970's is that there can be no reliable national security for America unless the economic viability of our domestic energy supplies is maintained. Imported energy supplies must not be allowed to reach such high levels that their dependency once again threatens both our economy and national security. We support the imposition of variable import fees as proposed by Senators Wallop and Boren as one means to achieve that goal. However, we would recommend that the fee be imposed only for an interim period of no more than three years and reevaluated at the end of that time to determine whether it is still merited by national security concerns.

In 1977 the United States was importing almost one-half of our crude oil requirements. That heavy dependency made us extremely vulnerable as a nation to interruptions in supply, whether accidental or intentional. We are sure there is no need to remind the members of the Committee of the gas lines and other economic shocks that accompanied the supply interruptions and foreign imposed price increases of the last decade. By simultaneously reducing demand through conservation and increasing domestic supplies through decontrol of domestic prices we have reduced our dependence on foreign oil throughout the first half of the 1980's. We have now reached the point where imports fill only about one-third of our needs.

However, this level was achieved only because price increases encouraged the surge in conservation and domestic drilling of the early 1980's. A continuation of precipitous price declines that we have recently witnessed threatens to undo much of the progress that has been made. Low prices will not provide sufficient incentive for new drilling nor justify continued operation of marginal wells. On the demand side, significantly increased foreign supplies are becoming available and being sold, not only displacing domestic oil, but gas and coal too. Our big boiler fuel customers have reported an increasing number of offers to replace natural gas with fuel oil cargos priced at "whatever it takes." There is also increasing evidence that coal sales or coal by wire electric power is being displaced by power generated from low-priced foreign oil.

Falling prices have already had a very negative impact on U.S. drilling activity. In December, 1981, an average of 4,520 rigs were at work in the United States. That number has now dropped to 1,308, representing a 71 percent decrease. The rig count has dropped by 32 percent in the last two months. Those idle rigs should now be at work exploring and developing the domestic energy reserves needed in the 1990's. Instead, the nation will be relying on huge amounts of imported energy during the next decade unless we adopt more farsighted energy policies today.

In the Department of Energy's publication, Annual Energy Outlook, 1984, it was found that imports could account for as much as 61 percent of total U.S. demand by 1995. This forecast assumed a decline in the average import price to $24.00/bbl by 1986 which in retrospect has quickly proved to be conservative.

It is impossible to predict the extent to which foreign producers are willing to drive prices down in order to wrest back the lion's share of the U.S. market. However, professor Bernard Weinstein of Southern Methodist University suggests that the OPEC countries could profitably produce crude oil at prices of $6.00 to $7.00 per barrel. According to Weinstein, at such prices U.S. drilling activity would come to a virtual standstill; demand would skyrocket; and the levels of imports would approach 80 percent. This possibility would not be so frightening if the suppliers were a diverse group. Unfortunately, however, two-thirds of the non-communist world's proved reserves are located in the Middle East and controlled by members of OPEC. Furthermore, production costs in the Middle East are extremely low compared to most basins in the U.S. Consequently, major OPEC producers could continue to profitably pump crude at very low prices long after wells in other free world countries had been shut-in and, of course, new exploratory and development drilling shutdown. It would not be long before OPEC would again have the upper hand on oil prices and supplies.

It has been suggested by some commentators that recent price declines do not truly represent the free market at work. As your colleague, Senator Nickles pointed out in his January 30, 1986, statement for the Congressional Record, the price cuts represent "calculated maneuvers by Government entities to increase their control over world market forces." Without a doubt, these governments are capable of knocking the price legs out from under us to recapture the U.S. market.

Some critics would have us rely totally on foreign producers as long as they hold down prices, and produce our own reserves only when foreign prices escalate to unacceptable levels. Unfortunately, as we learned in the 1970's, low domestic production cannot be turned around overnight. Many of America's independent producers and related oil service companies are already in precarious financial condition, and major companies are announcing capital expenditure cutbacks. Without them we will not be able to restore our domestic reserves to a secure level within an acceptable time frame. At the same time, we should be developing on a limited basis, not closing off, the technology to convert our sizeable resources of coal and shale oil to synthetic hydrocarbons. If we ever reached the point of importing 80 percent of our energy needs and a major supply interruption occurred, it would take years to restore domestic production to adequate levels. In the meantime, both the U.S. economy and national security would be severely, and perhaps permanently, damaged.

Furthermore, the cost of imported oil is already the biggest culprit in a very large federal trade deficit. You can imagine what the deficit might become in just a few years if imports rise to over 50 percent of oil consumption, and once again OPEC forces the price of oil to much higher levels. Such an enlarged trade deficit would have worsening economic consequences for the United States.

Congress should ask the Defense Department about the seriousness of rising levels of oil imports. What does the Defense Department think about import levels greater than 50 percent, coupled with a domestic exploration and development industry flat on its back? Our nation's defense runs on oil - not coal, natural gas, or nuclear energy.

The critics of import fees argue that they would disproportionately burden regions of the country that are heavy consumers of imports, specifically the northeast and midwest. They fear that import fees would cause their energy costs to skyrocket, thus raising industrial production costs to non-competitive levels. This argument ignores the fact that the proposed level of import fees would be designed merely to prevent a precipitous and destabilizing price collapse. The goal is to stabilize prices at a minimum survival level, somewhere in the low twenties. The market may eventually reach that level on its own but why take that national secuirty risk when we can ensure against it now with import fees.

Some recommend an increase in the gasoline tax rather than imposing fees on imported crude oil and refined products. Certainly such a tax would raise a substantial amount of new revenues and thereby help reduce the enormous federal deficit, but it does nothing to maintain an acceptable level of exploration and development of our domestic energy resources. The import fee does!

It is only through the imposition of import fees that we can arrest America's return to dependency on foreign energy. In doing so, we can send an important signal to OPEC that we have reached the point of no return on our goal toward substantial energy self-reliance. The energy policy decisions that are made today will determine our sources of supply and our national security in the next decade. We recommend that the fees be imposed on a trial basis for a period of no more than three years. This will allow the issue to be revisited at the end of that period to determine whether they are still

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necessary to preserve national security. If not, the fees should be allowed to expire. We strongly suspect that much of the industry's opposition to import fees has already evaporated in the wake of recent price declines and will disappear if prices plunge to the $10-15 level. We are sure you are aware that today our proven crude oil reserves are only 75 percent of what they were as recently as ten years ago, and they are going downhill. If the nation's lawmakers are still not inclined to tax foreign energy, at the very least, they should not compound the problem by further burdening domestic production with higher taxes under H.R. 3838.

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